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Railway Age

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Overseas Railway Affairs

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R. A. F. Mosquito bombers western Germany. These

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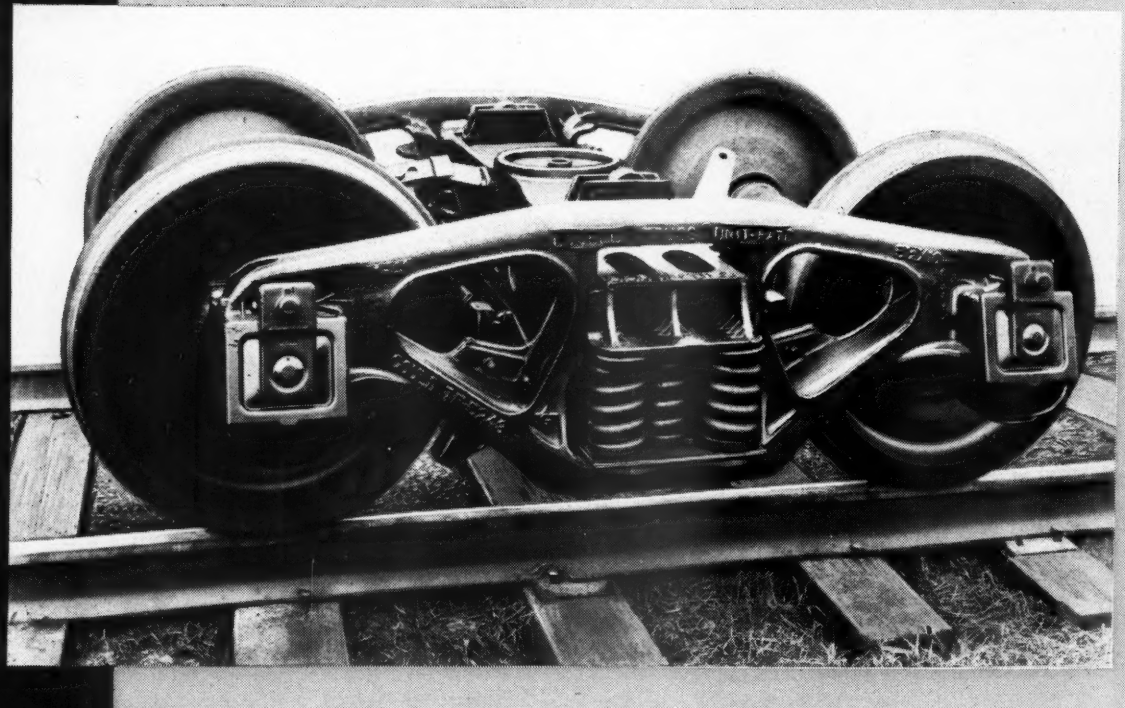

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Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name registered in U. S. Patent Office.

Vol. 116 April 15, 1944 No. 16

PUBLISHED EACH SATURDAY BY THE SIMMONS-BOARDMAN PUBLISHING CORPORATION, 1309 NOBLE STREET, PHILADELPHIA 23, PA., WITH EDITORIAL AND EXECUTIVE OFFICES AT 30 CHURCH STREET, NEW YORK 7, N. Y. AND 105 W. ADAMS STREET, CHICAGO 3, ILL.

WASHINGTON 4, D. C.: 1081 NATIONAL PRESS BUILDING, CLEVELAND 13: TERMINAL TOWER SEATTLE 1: 1033 HENRY BUILDING, SAN FRANCISCO 4: 300 MONTGOMERY STREET, ROOMS 805-806. LOS ANGELES 14: 530 WEST 6th STREET.

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Public Relations an Exact Science ***722***

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BECAUSE they greatly increase the capacity of the classification yard by permitting practically continuous utilization of the hump. More cars can be humped per hour and the hump is always available for the handling of peak traffic.

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The Week at a Glance

GROSS GROWS, NET FALLS: If the railroads keep on for 12 months of 1944 the way they have done in the first two months, they will wind up the year by carrying a smaller percentage of gross into net railway operating income than ever before in history. In such depression years as '32 and '38, the ratio of net operating income to gross was 10.5 and 10.4 per cent, respectively. In January and February, this year, net earnings were only about 10 per cent of gross. The implications of the recent large increase in expenses, in ratio to revenues, are analyzed in the leading editorial herein.

●

WHY WILLKIE LOST OUT: An editorial herein sees a lesson to other business leaders in Wendell Willkie's manifest tumble in popular esteem from 1940 to 1944. We are reminded that the crusading zeal, especially among younger business people, in Willkie's behalf four years ago had its origin in his able championship of private enterprise principles *versus* New Deal socialism. No sooner did Mr. Willkie achieve the nomination, however, than he seemed to lose his zest for warfare upon specific heresies against sound economic principles. And after his defeat, he practically quit discussing genuine domestic issues altogether. He forsook the market-place where he knew his way around for diplomatic drawing rooms, where he didn't. The editorial suggests that it might now occur to other spokesmen for business, who have taken up where Willkie left off, that equivocation on fundamental domestic issues (e.g., self-support *versus* communization in transportation) may not turn out to be the road to victory.

●

ESTEEM SOUGHT BY SCIENCE: What people think about the railroads, and how to gain their deeper regard, are questions usually answered by more-or-less-accurate hunches. Basing action on important problems upon guess-work, where reliable facts are available, is not in keeping with the railroads' approach to other problems—and these same methods of proved reliability can and should be applied for the efficient and certain achievement of sound public relations. Such is the contention of Holcombe Parkes, assistant to president of the Southern Railway, in a thoughtful and practical article in this issue. He does not theorize, but bases his account on actual experience. An analysis of this approach to opinion determination by Mr. Parkes is highly authoritative, since it is doubtful whether anyone else in railroad service has studied the subject at closer range or more intently than he.

●

POST-WAR EQUIPMENT: K. F. Nystrom believes that motive power and rolling stock should be depreciated on a 15-year life; that modernization of old equipment is not justified. He is of the opinion that the "poor old iron horse" as now available is too heavy and too costly, and needs a radical going-over to "get him back into the running." He is impressed with the need for a considerable number of improvements in passenger cars, and for a high-speed freight car truck. The Milwaukee's mechanical assistant to chief operating officer, as reported in an article in this issue, presented these and other timely suggestions this week in a New England railroad club address which bulged with ideas—many of them controversial. For one thing, he suggests that the A. A. R. mechanical division needs rather thoroughgoing reorganization.

●

PUBLIC RELATIONS' JOB: What are the boundaries of a public relations officer's responsibilities, and what should his title be? An editorial in this issue notes a tendency to give public relations officers a title suggesting wider duties than public contact only, and discusses the probable justification for an expanding concept of this position's function. The need is for a man technically qualified and with sufficient authority to instill in a large organization and the people whom it touches the mutuality of understanding which comes without special effort in a small business in a small community—where everybody knows all about his neightors.

●

OUR RAILROADERS IN INDIA: The Army has formally announced what many have known for some time—that units of the U. S. Military Railway Service are operating portions of the Bengal & Assam Railway in India, under command of Colonel John Adams Appleton, sometime general manager for the P. R. R. at New York. This is the railroad that the Japs, now trying to invade India, have in mind cutting in two if they can, because it is a main supply route to General Stilwell's forces hammering the Japs in North Burma. A map and further details will be found in our news pages.

●

GURLEY ON PROSPECTS: An analytical appraisal of some of the big jobs which lie before the railroads by the Santa Fe's Vice-President F. G. Gurley is presented in an article in this issue (being a condensation of a recent Pacific Railway Club address). He is especially impressed with the desirability of raising the net to tare carload ratio, and of moving freight terminal-to-terminal at speeds somewhat faster than that attained by the Pony Express 84 years ago.

●

TALKING TO HIMSELF: An American Fascist is one whose "method is to poison the channels of public information"; who uses "the news to deceive the public." He can be identified by his "appeals to prejudice and by the desire to play upon the fears and vanities of different groups in order to gain power." These definitions come, of all people, from the nation's No. 1 railroad baiter, Henry Wallace, writing in the N. Y. Times magazine. He certainly can speak as an authority on misinformation and appeals to prejudice if anybody can. The puzzle is why Henry declaims so passionately against his own practices—unless he is bowing out. There was a President once who orated himself into reforming, so it is said—in the matter, however, of alcoholic refreshments.

ARE LOCOS TOO COSTLY?: Lackawanna's President William White believes that steam freight engines are too expensive at present prices, and is fearful lest other power supplant them unless reduced overall costs from this type of power are achieved. He gave his views on this subject in an address, reported in our news pages, to the Atlantic States Shippers' Board this week. He also urged that the I. C. C. restore the freight rates in effect before the O. P. A. induced it to pare them about a year ago, and he warns that railroad credit must attain a higher level than at present if the carriers are to raise the investment money necessary to keep abreast of the times with ample and economical service.

●

FEDERAL FUNDS FOR RRs?: Another New Deal economist—emulating the now-deceased National Resources Planning Board—has come out with a book in which he advocates spending federal funds (with some strings attached) for capital improvements on the railroads. This book is reviewed interpretatively on page 734 herein—pointing out that the author's "government-spending" route to perpetual prosperity is only an extension of the policies of highway, waterway and air transport protagonists, who urge exactly that policy toward their favored segment of the economy, which the "spenders" would apply to all of industry, railroads included. Possibly the "free enterprise" beneficiaries of present spending policies would lose their zest for the practice if the railroads were included in the program.

●

TROOP CAR ECONOMY: The principal reason that so many more soldiers are riding Pullmans in this war, than in the last one, lies in the perfection of the technique for control of cars and troop movements. An article herein tells how the Army's Traffic Control Division, co-operating closely with the Military Transportation Section, A. A. R., has been able to achieve such noteworthy results—beneficial both to the soldiers and to the railroads, in the minimizing of empty and light-loaded movement. The key to the accomplishment appears primarily to be the ample notice of desired troop movements given to the Traffic Control Division, enabling it to schedule outbound movements to use the equipment of inbound loaded trains. Exchange of impedimenta between army units—instead of each one lugging its own wherever it goes—has likewise been a big help.

●

ECONOMICS OF CURVES: An all-inclusive formula which develops the variations in operating expenses per 1000 g.t.m., in ratio to different degrees of curvature, is set forth in an A. R. E. A. committee report, presented in an article in this issue. By use of this formula, applied to normal traffic volume, the savings of any particular curve-reduction proposal may be assayed—and these savings related to estimated cost of the improvement, to reveal the degree of its economic justification. Methods of measuring quantitatively other advantages of curve reduction are given, so that these also may enter into the calculations.

OKOLITE-OKOPRENE CABLES
HAVE HIGH RESISTANCE TO OIL, ACIDS AND CORROSIVES

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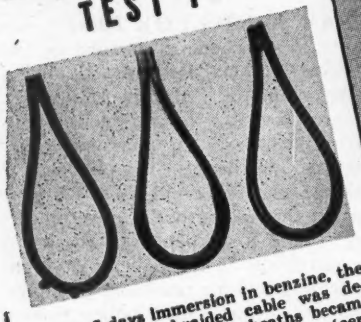

After 7 days immersion in benzine, the insulation on braided cable was destroyed (left), rubber sheaths became soft, increased 51.7% in diameter (center), while Okoprene stayed in excellent condition and increased only 22.1% in diameter.

TEST 2

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3592

RAILWAY AGE

Railway Gross Earnings Increase; Net Declines

If the railways should continue to make earnings throughout 1944 at the same rate that they did in the two months of this year for which statistics are now available, their gross earnings for the year would be the stupendous record sum of $10 billion—about 10.6 per cent, or $1 billion, more than in 1943, and 57 per cent, or $3⅔ billion, more than in 1929. This $10 billion gross earnings would be made by handling about 6½ per cent more freight traffic and 28 per cent more passenger traffic than in 1943, and about 70 per cent more freight traffic and 205 per cent more passenger traffic than in 1929. But after rendering this tremendously increased service, and after paying their operating expenses and taxes, the railways would have left about 21 per cent, or $286 million, less net operating income than in 1943, and about $200 million less than in 1929. Their net operating income (after taxes) in 1929 was 20 per cent of their gross earnings; in 1943, only about 15 per cent of vastly larger gross earnings; and in 1944 apparently will be only about 10 per cent of the largest gross earnings of all time.

Efficiency FOR VICTORY

This decline in the proportion of gross earnings carried to net operating income is, of course, due to increases in operating expenses and taxes. In 1941 and 1942 operating expenses increased relatively less than gross earnings, the ratio of expenses to earnings declining from 72 per cent in 1940 to 68.5 per cent in 1941 and 61.6 per cent in 1942; and net operating income largely increased in spite of huge increases in taxes. In 1943, however, the ratio of expenses to earnings increased to 62.4 per cent; taxes largely increased again; and net operating income declined. Finally, in the first two months of 1944, principally owing to advances in wages, the ratio of expenses to earnings increased to 67½ per cent; taxes further increased; and net operating income declined to a basis indicating, in view of prospective traffic and operating conditions, that the railways will in 1944 derive from the largest gross earnings in history a lower net return than they made in 1943, 1942 or fifteen years ago in 1929.

It is a significant fact that at a time when the government is raising so much money for carrying on the war, the increase in railway operating expenses due to recent advances in wages has *decelerated* the increase in taxes collected by the government from the railways. The increase in railway gross earnings in 1943 compared with 1941 was 70 per cent; the increase in operating expenses only 54 per cent; and this resulted in such a large gain in taxable income that taxes increased 239 per cent. On the other hand, in the first two months of 1944 gross earnings increased less than 11 per cent while operating expenses, principally due to advances in wages, increased 20 per cent, with the result that the increase in taxes was less than 9 per cent and consisted largely of increases in payroll taxes due to the wage advances.

If, as current trends forecast, operating expenses and taxes take 90 per cent of railway gross earnings in 1944, the remaining 10 per cent will be the smallest percentage of gross earnings ever left for net operating income in any year in railway history. Net operating income declined to only 10.4 per cent of gross earnings in 1932 and to 10.5 per cent of it in 1938. Will the railways in 1944 be unable to retain as large a percentage of the largest gross earnings in history as they retained from gross earnings less than one-third as large in the depression years 1932 and 1938?

A Lesson for Business in the Willkie Debacle

As railroad men have good reason to know, there is no school which inculcates the principles of private enterprise economics, and promotes preferences for them over socialism, quite so thoroughly as the experience of running a business with the government, or capital furnished by the government, as a competitor. Because Wendell Willkie had that experience, and because of public and private statements of his prior to 1940, there is no question that he had a more practical comprehension of fundamental domestic economic issues than any candidate who has been a presidential candidate of either major party in at least a generation.

It was because the more open-minded business leaders of the country believed his grasp of these basic issues excelled that of any professional politician that they initiated the amazing "We Want Willkie" movement in the summer of 1940. The Old Guard, high-tariff, monopolistic elements in the country didn't like Willkie any more than the New Dealers did—and the support which gave him his chance in 1940 came from the genuine liberals, i.e., advocates of freedom of the economy both from governmental regimentation and from domination by die-hard protectionists and monopolists.

But like so many otherwise estimable persons who are bitten by the political bug, Mr. Willkie soon after he got the nomination in 1940 began to be a good deal less definite and candid on domestic economic issues than he had been before. Perhaps he believed that he had the enterprising and thoughtful business element with him already, and that it was his cue to curry favor with groups whose views were different from, and perhaps even opposed to, those of his original supporters.

His 1940 campaign was a disappointment to his original and most ardent adherents; and after his defeat his neglect of basic domestic economic questions was even more pronounced. He seemingly put aside the interests which had originally won admiration for him, and set about to establish himself as a kind of grand-stand oracle on world politics—subject matter in which he had no more practical competence than the average politician has in economics. He virtually quit discussing the issue of private enterprise versus state socialism, for which his previous study and experience qualified him, in the hope of glistening in an unfamiliar firmament.

There is no telling whether, with the war-time confusion of international issues, a man could win election as President by a simple, forthright stand for domestic policies calculated to rescue this country from its present danger of degenerating into just such an absolute socialized autocracy as we are struggling against overseas. But in such leadership, even if supported only by a minority, lies the only hope that the principles of Americanism will survive. It was abandonment by Mr. Willkie of his leadership of this body of thought which brought his political career to an end. The enmity of the Old Guard, protectionist die-hards didn't do it, because they were against him from the first.

Intelligence is not the only quality which liberal business opinion needs in its leadership—it also requires devotion to principles which is deeper than mere expediency, and which will defend them, if need be, at the sacrifice of personal ambition. This is a lesson which might well be learned by the successors to Mr. Willkie in spokesmanship for business who are now temporizing with gigantic schemes of "public investment"—seeking to excuse those which, they say, will "help business," while pretending still to oppose governmental invasion of the economy. It may turn out, after all, that a certain ingredient of honest forthrightness is still the best policy.

Progress in Research

At no time in history has American industry looked to the future with as keen anticipation of the possibilities of new developments as now. This anticipation is born of the many reports, more or less vague as yet, of the developments in metallurgy and in science that are coming to light in war-associated industries. Back of all this is the widespread belief that industry will undergo a drastic transformation in the period immediately following the conclusion of hostilities when these developments are released for public utilization.

It is significant for the future of the railway industry that never before have the railways shown as much interest in research. Judge Fletcher's A. A. R. committee on post-war developments on the railways set up a subcommittee on research as one of its initial measures, and this subcommittee has already submitted a report that has become a subject of heated keen controversy. Reflecting the same desire to be alert to postwar developments, several individual roads have already established new departments charged with responsibility for exploring possibilities in many directions. And within the railway organizations themselves, there is widespread alertness among individuals to new possibilities.

This attitude of expectation holds much of promise for the railways. It is creating an attitude of receptivity to new ideas, to new proposals for improvements in materials and methods alike. It is not surprising that there is much divergence of opinion regarding the scope and limits of research; at present, these limits are not of primary importance. Neither is it disconcerting that there are wide, perhaps violent, differences of opinion regarding the relative value of a highly centralized railway-operated laboratory as contrasted with numerous individual railway or manufacturer-maintained facilities, or those available in the uni-

versities. And it is not discouraging to observe the lack of agreement regarding the problems which are most pressing.

The real condition that is of importance at the present time is the greatly awakened interest among the railways to the possibilities of research. This is a striking and a wholesome development. It is far more important now than the determination of the specific measures to be adopted. Out of the present discussions and disagreements will come a better and more universal understanding of the entire subject of research that will contribute to a constructive determination of the means to be employed and the objectives to be sought. Rather than being disconcerting, the present widespread differences of opinion on almost every phase of research are to the good, for they denote an awakening to postwar possibilities that will bring benefits to the railways in many directions.

Coach Ride Impressions

Slam, bang! Jostle and jolt! Vertically, horizontally, and fore and aft, whenever slack had to be taken in starting the train. Also squeak, squeak, squeak, like a bevy of rats at a stable convention!

These were the actual impressions indelibly made on the minds of numerous passengers who recently had to take a long, noisy and hard ride in a coach daily operated on a progressive railroad. Heaven help the riders on "secondary" roads, if their passenger cars ride proportionately worse.

While the coach referred to was undoubtedly old, it was by no means antique. In fact, it had been modernized, probably within the last three or four years, had quite effective air-conditioning equipment, indirect lighting and modern soft-cushion, reclining-back seats. The car was unquestionably a hard rider, however, in spite of having six-wheel trucks and the conventional combination coil and elliptic spring suspension.

Without a careful check of the wheel, truck and side-bearing conditions, it would be hard to say why this car rode so hard. It was a record breaker. There was the constant rattle and bang, supplemented by continuous squeaking which may have been due to body weave, a loose partition, friction between heater pipes and supports, or any one of numerous other similar causes.

The train moved at moderate speed, probably between 50 and 60 miles an hour, so the bad performance of the car could not be charged to excessive speed. That mechanical conditions of the truck and car were not entirely responsible for the rough ride was indicated by the fact the car operated more smoothly and quietly after passing an extensive section of track

The Manpower Shortage

"Your help is appreciated, madam, but please wait till the train stops."

on which maximum car vibration and noise were experienced. Even on the best of track, however, this car, and doubtless many others like it, are now giving the American public a very bad impression of railway transportation. It is obvious that railroads must continue for some time to operate a large amount of old equipment but frequent checks would seem to be indicated to make sure that both car and roadway conditions are maintained so as to give the smoothest ride practicable with the equipment now in service.

Incidentally, sanitary conditions in the car were in some particulars quite unsatisfactory. The train crew made a definite and fairly successful effort to keep the main passenger compartment clean throughout the trip. Wash and toilet rooms also were swept out, but seemed generally dark and forbidding in appearance and had, in some instances, objectionable odors, reminiscent of Chic Sales. More adequate ventilation in these rooms was a crying need in the public interest. Also it wouldn't hurt to remove the numerous small pipes now located at floor level, making it practically impossible to clean thoroughly or wash out the corners of the rooms.

Many of the deficiencies in truck and body construction of the large amount of older passenger-car equipment now in service are inherent in the original design and can be remedied only by replacing with modern cars. The immediate problem confronting the railways is to get enough passenger equipment of any kind to handle the traffic, but, looking ahead to the intensively competitive period after the war, the principal problem will be replacement of old with new equipment at a rate which will probably tax the passenger-car building capacity of the country. Unless this problem is squarely faced and plans laid now to scrap cars which are objectionable to the public and substitute new equipment adapted to modern needs, it is difficult to see how the railroads can expect to maintain passenger traffic at levels which can and should be reached in the future.

What Is the Scope of "Public Relations" Work?

There appears to be a tendency on the railroads no longer to entitle as "public relations manager" the officer charged with oversight of the company's relations with the public. The growing practice is to give this position some such appellation as "assistant to president" or "executive assistant." Some, no doubt, may consider such a change in terminology to be predominantly camouflage—adopted to avoid warning the public that this man's job is to cultivate its esteem.

Such a motive, while not an especially lofty one, is in no way unworthy. An officer in such a position might be, and often is, an all-around railroad man—yet the "public relations" title may suggest to the critical and uninformed that his competence is limited to cajolery. If this officer really enjoys an important official status, able to explain and interpret all the major aspects of a railroad's operations to the interested public, then a designation for his job which connotates such standing, is, probably, not only more politic, but more accurate as well.

There is, however, a better reason than the foregoing for giving the officer charged with "public relations" a title suggesting wider responsibilities—to wit, that favorable public relations cannot be achieved either (1) if the public relations officer is the only man on the railroad who gives serious and continued attention to relations with the public, or (2) if he concentrates his attention on the public, to the neglect of the railroad's own organization. Few things could be worse for a company's public relations than to have its staff conclude: "Our public relations are all taken care of—we have hired a man to attend to them."

The predominant concept of the duties of a public relations officer is still the narrow one of maintaining contact with the press. This is an important function, which not only needs doing but doing well—yet it is only a minor proportion of the total job of establishing and maintaining favorable relations with the public. The scope of "public relations" in a big business can be best appreciated if examined in a small one. A small concern in a small community, if it is in competent hands, usually enjoys good "employee relations" and "public relations" without having to hire a specialist to help it achieve them.

The reason is that the employees know how much the company is earning; they understand the relationship between their wage rates, and prices charged to customers; and appreciate how their jobs depend on keeping the customers satisfied both as to service and price. The company's neighbors know its business affairs, and need no assistance in appraising its contribution to the community's well-being.

A big business is not understood so readily. One department is likely not to understand another, and may be slow to subordinate its interests to that of the business as a whole. Employees and management are too often given to misinterpreting each others' motives. And it is much too easy for the public to misunderstand an enterprise which is so complex that even its component elements fail fully to appreciate each other. *The "public relations" officer is the specially-skilled technician whose duty and whose art is to inculcate in the big organization and its enlarged neighborhood the mutuality of understanding which comes without effort to a small concern.*

This is a large assignment—one embracing all of what military men call "liaison" and "intelligence," and including also some "staff work." The function of this officer is not usually deemed to be as comprehensive as this—yet it is doubtful whether full achievement in "public relations" will be secured until it is generally so conceived, both by the officer holding the assignment and by the management which employs him.

Traffic Control Division Officers Confer with Representatives of Association of American Railroads. Left to right: Colonel E. C. R. Lasher, deputy chief; Colonel W. J. Williamson, chief; Lieutenant Colonel I. Sewell Morris, chief, Passenger Branch; A. H. Gass, manager, Military Transportation Section, A. A. R.

Troop-Train Cars Get Little Rest

Conservation methods developed by Army Transportation Corps' Traffic Control Division, in close cooperation with the railroads, keep equipment on the job almost continuously

EQUIPMENT conservation methods, developed by the Army in close cooperation with the railroads, have, since November, 1942, given Pullman berths to more than three-quarters of a million soldiers who would have made their night-time journeys in coaches if previous utilization conditions had prevailed. The conservation plan, which has thus saved an estimated 20,000 sleepers and large numbers of other troop-train cars, is in the main a set-up for the precise coordinating and matching of movements, insuring that a car completing one job is thereby placed for the next, with deadhead mileage reduced to the absolute minimum. Other phases involve swaps of heavy impedimenta, thus reducing the transportation of such equipment, and the so-called furlough-en-route idea.

The Army agency charged with responsibility for these matters is the Transportation Corps' Traffic Control Division, headed by Colonel W. J. Williamson with Colonel E. C. R. Lasher as deputy chief. Lieutenant Colonel I. Sewell Morris is chief of the Division's Passenger Branch which handles the troop movements, working through the Association of American Railroads' Military Transportation Section, headed by A. H. Gass and located at T. C. D. headquarters in Washington's Pentagon Building.

T. C. D. has jurisdiction over all troop movements in groups of 40 or more, control over movements of smaller groups having been decentralized to give jurisdiction to the Army's local transportation officers. The jurisdictional boundary was fixed at the point where more than one Pullman car would be required for a movement. The Army, by assigning two to a lower berth and one to an upper, transports 39 troops in a single tourist sleeper. While the smaller group movements on orders are numerous, they do not account for a large proportion of the soldiers seen in regular cars by the traveling public. It has been estimated that 80 per cent of the uniformed travelers on regular

Equipment Required to Move a Division Has Been Reduced Materially by the Plan for Swapping Heavy Impedimenta of This Type

trains are men on furlough. The great bulk of troop movements is on troop trains or in special cars in regular train service.

T. C. D. was able to get its conservation plan under way on a voluntary basis in November, 1942, and some 300 cars a month were saved by the "selling" job which it did between then and April 15, 1943. The big gain has come since the latter date; for it was then that the Chief of Staff issued an order vesting in T. C. D. authority, within the limits of military necessity, to fix actual dates and times of rail movements of Army units as determined by the availability and economical use of railroad equipment.

This does not mean that T. C. D. has authority or responsibility for the ordering of a troop movement. The actual order for the movement is a staff function; but such orders, except in emergencies or port movements, now carry only approximate dates, leaving T. C. D. with discretion to fix the exact date and time of departure, thus permitting the greatest possible coordination of all pending moves in the interest of equipment conservation. No domestic movement order can now fix an exact date unless there has been previous consultation with T. C. D.

Prior to April 15, 1943, T. C. D. was required to arrange for movements as directed by the ordering officers, irrespective of the equipment situation. This resulted in movements without sufficient time to plan; and in a pattern of unmatched moves which required a substantial amount of deadhead mileage.

In the latter connection, for example, if movements from A to B and from B to C were ordered at about the same time, there was no authority in T. C. D. to match them up so that the equipment making the A-to-B move would get into service immediately at B for the B-to-C move. More than likely the latter would have been ordered a day or two after the A-to-B move had been completed and the equipment taken away on an empty movement, only to be brought back to B a day or two later (another empty movement) for the B-to-C move.

Under the present set-up, T. C. D. would, consistent with military necessity, have authority to match the foregoing moves, thus eliminating the empty mileage. Also, it might be found possible to bring other pending movements into the picture so that the equipment would find another job waiting when it arrived at C.

The move-matching peak so far was a tie-in of schedules whereby seven divisions were moved in turn with the same rail equipment. Some indication of the scale of this operation may be gained from the fact that approximately 15,000 men are in a division and that organizational impedimenta had to be transported with each move.

Every phase of the plan contemplates full cooperation and consultation with the railroads. Mutual problems and ideas for improved procedures come up for discussion in general meetings held every six months in the nine service command areas. These meeting are attended by T. C. D. officers, local transportation officers, and representatives of the carriers.

When a division is to be moved, T. C. D. frequently receives as much as 30 to 90 days' advance notice of tentative plans for the shift. It thereupon assigns one of its officers to arrange and preside over a special meeting attended by the local transportation officer, and representatives of the origin territory passenger associations, the A. A. R., Pullman Company, and interested railroads. There the movement is mapped out, including routes, schedules of each train, consists of trains, etc.

The T. C. D. officer in effect "shops around" for trains, drawing from the various railroad representatives commitments as to what their roads can handle. Experience has shown that practically no change in plan is required after a movement has been set up at one of these meetings.

It requires approximately 67 passenger and mixed trains to move a division when all impedimenta go along. This has been cut to an average of 35 trains as a result of the plan for swapping heavy impedimenta. Whenever possible a unit being transferred leaves its heavy impedimenta for its successor, and picks up like equipment left at its destination by its predecessors there. A variation of the idea is the picking up en route of new equipment at a plant near the destination station or port of embarkation.

Still other transportation savings have come from adjustments of training programs, T. C. D. having persuaded the training commands to avoid long hauls and cross-hauling. Under the former set-up, for example, in one of the forces of the Army, a trainee might be progressed through his training by assignment to the South initially, and thence in turn to the far West, Southwest, Northeast and back to the South. Now all five phases of such a program would be set up in each of the three sections into which the country has been divided for that purpose.

Moreover, in order to cooperate to the fullest possible extent with the carriers, while at the same time meeting the military necessities of a situation, T. C. D. may on occasion postpone one movement in favor of another, or defer a local movement to protect a port movement. Port movements are put in, precisely when the port command wants them, but even there T. C. D. does not tinker with the actual operation of the trains involved. It insists upon on-time delivery and lets the railroads do the railroading.

With respect to smaller movements, if they be groups of 40 or more, T. C. D. now requires 72 hours' advance notice from local transportation officers, except in cases of emergency.

Since this requirement became effective on April 15, 1943, the 72-hours' notice has been forthcoming in over 98 per cent of the cases.

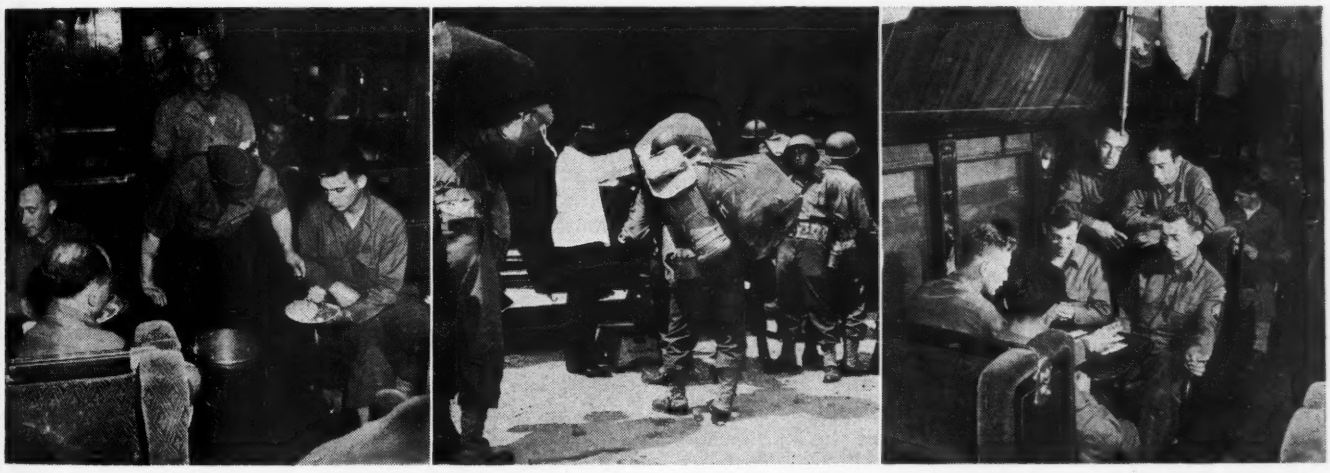
The movement order is turned over by T. C. D. to the A. A. R.'s Military Transportation Section, where it is assigned a "main number" and passed on to the interested carriers through the chairmen of their passenger associations. Each traveling unit, whether it be on a troop train or in special cars on regular trains, gets a "main number," and the movement, for security reasons, is thereafter referred to only by that number. When the movement actually gets under way, the A. A. R.'s Military Transportation Section keeps it under continuing check to insure performance in accordance with plans. Army movements run into 4,500 to 5,500 "mains" a month.

So that the carriers may make good use of the 72-hours' notice, T. C. D. requires them and the Pullman Company to notify it, by 5 p.m. on the second day prior to date of movement, of all "mains" that can't be protected with sleeping cars. The railroads may then be told to supply coaches; and if they are unable to do so, they so advise T. C. D. by 4 p.m. of the day prior to date of movement.

This affords time for orderly postponement of the movement, or for arrangements to give it priority over another.

The railroads are given "almost unlimited" authority to consolidate small movements in order to save crews, cars, or motive power. Consolidation is prevented only when military necessity won't permit it. Likewise it is required only on grounds of military necessity. Local transportation officers may suggest consolidation, and T. C. D. will pass such suggestions along to the carriers. It will not, however, require that they be adopted.

The furlough-en-route plan, mentioned at the outset, was worked out to avoid unnecessary travel in cases where troops are being given their final furlough-at-home before being assigned to replacement training centers from which they proceed overseas. For example, if a group of Middle West boys at a Texas post were to be assigned to a replacement training center in the East, they would get their orders to report there as they left the Texas post for their at-home furlough. Thus they would make a direct trip to the replacement training center, with the furlough as a stop-off en route, rather than going on furlough and returning to the Texas post, only to find orders requiring them to proceed immediately to the Eastern center. This procedure is said to have brought "appreciable" savings in troop travel; and, incidentally, it relieves the soldiers, traveling as they are on orders, from paying their fares home and back from the furlough.



The Army Gets 39 Troops in a Sleeper, Assigning Two to a Lower Berth and One to an Upper
Official U. S. Army Photos.

Public Relations an Exact Science

Tested technique of opinion research enables a railway to deal with its relations with people by same concrete factual method that it applies to engineering problems

By Holcombe Parkes,

Assistant to President, Southern Railway

MANAGEMENT in the railway industry has always been realistic and cautious. It cannot afford to be otherwise. Because of the very nature of railroad operations—the simultaneous, continuous and fast movement of people and tons of freight on a slender ribbon of steel—railway management must deal with cold, hard facts and figures; largely with renitent elements such as time, distance, speed, weight and power. No one with an understanding of what railroading really is would have it otherwise; for both human lives and the products of human labor are at stake.

Naturally, generations of this kind of activity have produced a type of management that is sometimes thoughtlessly described as "inflexible" and "unimaginative," simply because it habitually bases its decisions on proven facts and accurate figures instead of relying on guesswork, hunches or wishful thinking.

A Yardstick for Measuring Opinion

But today railway management is faced with a multitude of vital problems which hinge primarily on what people know and think rather than on physical and tangible things—problems, for instance, of legislation, regulation, merchandising, employee and public relations. Management, therefore, is confronted with the problem of getting facts and figures on the knowledge, attitudes and opinions of people; of finding a yardstick with which to measure the mind of railway patrons (actual and potential), and, more important, the great voting public which, in the final analysis, will determine the future of the railroad industry.

One way to get such facts and figures is by turning to the comparatively new science of opinion research, the results of which can be employed by railway management, not only as guide-posts for general policies, but also to pattern solutions for problems of everyday service—costs, pricing, and relations with people, individually and collectively. For modern opinion research can bring to many of the questions facing railway management now, such trustworthy facts and such dependable figures as will enable it to make, for instance, as sound a decision on a problem of legislation or service or public relations as it now makes on a problem of locomotive design or yard layout.

Many railroad officers are familiar with these new research techniques and their practical application by reason of the three national public opinion surveys sponsored since 1941 by the Association of American Railroads. Those who have been familiar with these studies have seen how they have furnished realistic guidance for the Association's public relations and advertising program during the past two and a half years.

One of the first large-scale tests by an individual railroad of this new management tool has already been made by the Southern Railway System, as a part of its new public relations program. In this case, the Opinion Research Corporation of Princeton, N. J. (the organization which made the A. A. R. surveys), was employed by the Southern to make a comprehensive survey in its territory to:

1. Set up guide posts for advertising and public relations activities;
2. Evaluate the attitude of people in its territory toward the Southern and toward railroads in general; and,
3. Ascertain and measure the concepts of people regarding the future of the South—and to gage their faith in that future.

The resulting study involved personal interviews with several thousand people in Southern Railway territory, scientifically divided as to sex, age, income, occupation, and residence (rural and in cities of various sizes). Supplemental interviews were obtained from special groups such as farmers, travelers, shippers, retailers, editors, ministers and newcomers to the South.

The findings, together with their supporting statistical detail, were presented to the railroad in the form of a 75-page report. Some of the highlights of this report are briefly mentioned in the following paragraphs—not necessarily to indicate its scope or character—but rather to illustrate the specific application of this type of research to the interests and problems of an individual railroad. Naturally omitted are some findings of a confidential nature.

Post-War Optimism and Pessimism in the South

One of the primary themes of the Southern's institutional advertising during the past two years is expressed by the slogan, "Look Ahead—Look South." Thus, the survey finding that people in Southern Railway territory are about equally divided as between those who think that they will be "better off" and those who believe that they will be "worse off" after the war than they were before is of special interest.

It is noteworthy that users of freight service are more optimistic about the postwar period than is the general public—three out of five of the shippers and retailers, for instance, expecting that people will be better off. On the other hand, farmers and lower income earners are less convinced than the general public that the South will be better off after the war.

Interpreted in terms of the Southern's present institutional advertising program, this particular finding indicates clearly that:

1. The primary objectives set up for the Southern's advertising program are timely and appropriate; because

the South obviously needs leadership to visualize better days;

2. It should continue to hammer away on its present theme of "Look Ahead—Look South," because there is still a big job to be done to offset a great deal of sectional pessimism; and,

3. Special emphasis should be placed on this theme in advertising designed for farm publications and online newspapers.

Post-War Jobs

Despite a disturbing amount of post-war pessimism, people in Southern Railway territory do not anticipate a long depression after the war, because the majority (57 per cent) predicts more manufacturing in the South in post-war years than there has been previously. Moreover, almost everybody in the area (98 per cent) will welcome greater industrialization of the South, basing their opinion on the fact that it will mean more jobs (greater employment) and more money circulating locally (increased local business).

The survey findings suggest, therefore, that the Southern's advertising and publicity should talk about the industrialization of the South largely in terms of jobs for Southerners and payrolls to improve Southern trade. Thus, a valuable by-product of the survey measurement of the public's thinking about the future of the South is a clear guidepost as to *how* the railroad should talk about possible industrialization if its hopes to convert those who are pessimistic—while it encourages those who are optimistic.

Related to these findings and their interpretation is the survey report that railroads are among the outstanding industries which people in the Southern's territory feel will contribute most to the prosperity of the South after the war. More than two-fifths of the people (44 per cent) believe the textile industry will be the business most likely to bring prosperity. Railroads are mentioned second (by 19 per cent).

This high ranking may, in turn, be due to the Southern's good reputation both as a large and desirable supplier of jobs and as an organization which pays good wages. On the latter point, the survey shows that almost one-third of the people along its lines say that the Southern pays its employees "high wages"; two-thirds say "fair wages"; and only one per cent say "poor wages."

The fact that the Southern normally carries a large volume of agricultural products gives special significance to the survey's findings about the public's rating of various Southern crops and its views as to the future of these crops.

Special Problems with Farmers

According to the report, cotton is still "king." Of all crops, it is considered by the public as the most important to the South, but the margin is much less than might be expected. The runner up, contrary to popular belief, is not tobacco but corn; 35 per cent say cotton is most important to the South; 26 per cent say corn; and 19 per cent say tobacco. And more people (56 per cent) are optimistic about a future market for corn than for cotton or any other Southern crop.

Among farmers themselves, corn holds an even stronger position of importance, 34 per cent of the farmers saying that cotton is most important; 31 per cent designating corn; and 16 per cent selecting tobacco. Thus in future efforts to promote the welfare of agriculture in the South, the Southern will give appropriate recognition to corn as a coming Southern crop. The attitudes of farmers as patrons of railroad freight and passenger services were also surveyed, with some important policy guides resulting.

Industrial Promotion

The survey shows that special efforts are warranted to sharpen the public's awareness of the Southern's contribution to its territory's industrial development. Fewer people voluntarily mention the Southern's part in developing industry than refer to its help to farmers. But the survey also shows that the public has confidence in the railroads, for, when asked a general question, people in Southern Railway territory agree overwhelmingly (96 per cent) that the railroads have helped the South. This near unanimity is shared by all population groups alike.

The principal way in which people believe that the railroads have helped the South is largely functional—by moving goods and people. Almost half of the people interviewed in this study are already sufficiently aware of this to mention it voluntarily. All of which points to the advisability of giving new promotion emphasis to the fact that the Southern effectively and efficiently ties the South to the nation's great markets and metropolitan centers.

With these evidences of appreciation for, and confidence in, the railroads—as well as other evidences revealed by the survey—it is apparent that the Southern can count upon a friendly reception to news and advertisements which refer to specific ways in which the Southern is trying to be helpful in the future industrial development of the South.

Government Regulation

A majority of the people in Southern Railway territory favor less government regulation of the railroads after the war than existed before the war, a survey finding which may be of great value to the Southern in formulating its post-war public relations programs. Less than a fourth of the people favor more regulation.

Those from whom the railroads have most to fear on this score (those most favorable to increased regulation) are young people (under 30 years of age) and lower income earners. Leaders of thought, such as editors and ministers, are strongly (57 per cent) in favor of less regulation; only 10 per cent of them want more. Thus the Southern's public relations job on this subject is shown to be a specialized one directed at individual segments of the public, rather than the whole public.

The survey also suggests that another basis for establishing greater public good-will for the Southern may be in appealing to the public's sense of fair play. A substantial number of people in the territory (44 per cent) already believe that the railroads have been treated unfairly in the last five or ten years. Of these—56 per cent say that railroad traffic has been taken over by buses or trucks (due, in part, to unfair competitive conditions); 28 per cent mention discrimination in taxes and lower bus and truck rates; and 9 per cent say that "the railroads must maintain themselves but taxpayers maintain highways."

Only 19 per cent of the people in Southern Railway territory voted in favor of government taking over the railroads for the duration of the war. However, the realization that, even today, a fifth of the people favor government operation is a useful reminder that seeds of misunderstanding still exist. It is a timely warning that

the advantages of private enterprise, and specifically of private operation of railroads, should be emphasized in the Southern's advertising and publicity whenever and wherever possible.

Young People

Among the groups which the survey shows should have special public relation attention in Southern Railway territory is one composed of young people (under 30 years of age). The study presents clear evidence that these young people are considerably less accurately informed about railroads and less inclined to be friendly to them than people in older age groups. For instance, they are strongly inclined to the opinion that the railroads have been treated fairly in regulation during recent years—conversely that they have not been treated unfairly. They are weaker in favoring less regulation after the war, in fact 57 per cent of the youngsters favor equal or more regulation. And they are more critical. On the other hand, they commend strongly the job that the railroads have done in handling war traffic and class the Southern's freight services as "pretty good."

These findings confirm the sound public relations rule that there should never be an end to the telling of an industry's story because a new and uninformed public is constantly arising in place of the old. They point, also, to the need for developing new and additional avenues of approach to the younger generation. (One result of this finding has been the recent placing of 30,000 copies of the A. A. R.'s Teachers Kit in the hands of teachers in Southern Railway territory.)

The Railroad War Job

The public's appraisal of railroad service in wartime is illustrated by the following excerpts from the survey report:

"The vast majority of people in Southern Railway territory believe that the railroads in the South have done a good job of handling traffic since Pearl Harbor. 89 per cent say they have done a good job; 10 per cent say fair; and only 1 per cent say poor.

"Overwhelmingly, people believe the railroads are doing everything they can to provide good service for the public, respite the war. 93 per cent say this; only 7 per cent say they think the railroads could give better service than they do."

But the survey shows clearly that there is still a public education job to do, even on wartime transportation. For example:

"The minor proportion who believe the railroads could give better service explain their opinion this way: 27 per cent say railroads could provide more equipment (or more comfortable equipment); 10 per cent say railroad employees could be more courteous; 9 per cent say railroads could keep cars, rest rooms and seats cleaner; 8 per cent say the railroads could keep on schedule better than at present."

People in Southern Railway territory are also favorable in their comments about railroad freight service. 88 per cent think it is pretty good. Only a small fraction (12 per cent) believe that freight service needs improvement. But those who do think so are primarily the more frequent users of freight service, for instance, 20 per cent of the retailers, 15 per cent to 17 per cent of the shippers and 16 per cent of the people who have received freight, as compared with only 8 per cent of those who have neither shipped nor received freight.

Passengers' Opinions

Some of the most interesting findings in the survey deal with the reactions and attitudes of railroad passengers. The basic findings are that:

Of the people in Southern Railway territory 47 per cent have ridden on trains in the past year; 79 per cent of these patrons rode in coaches and 22 per cent in Pullmans; 31 per cent of them patronized dining cars; and, 31 per cent to 37 per cent of the recent and frequent train riders are also shippers of freight.

Even more significant are the opinions of these passengers. For instance, frequent and recent train riders are more inclined than other groups to say that the railroads could provide better service despite the war, and they are more inclined to rate the Southern as "behind the times"—less inclined to give it a "progressive" tag. Because many of these recent passengers are new customers—with obvious postwar importance—such survey findings have special pertinence to the Southern's public relations planning.

Most of these adverse opinions change in direct relation to the time and frequency of the respondents' experience in train riding. Those who ride infrequently or not at all (one trip or none in the past ten years) generally express opinions similar to those of the whole public. As experience in train riding increases, the rider's opinions tend to become more critical; as experience becomes recent, criticism is sharper. The implication is obvious—rail travelers' tolerance with war-time travel difficulties is apparently wearing thin and thus they need special attention, public relations-wise.

Railroad Good Will

Perhaps the most encouraging conclusion prompted by the findings of this study is the balance in the railroad's account in the Bank of Public Good Will. For instance:

96 per cent of the people say the railroads have helped the South;

99 per cent of the people say that the railroads have done either a good job or a fair job of handling war traffic;

93 per cent think that the railroads are doing everything they can to provide good service for the public despite the war;

88 per cent class the Southern's freight services as "pretty good";

95 per cent express the opinion that people in the South "like" the Southern;

84 per cent say they have heard no criticism of the Southern or its services; and,

Eight out of every ten people call the Southern "a progressive, up-to-date railroad."

Thus the Southern finds, in this study of public opinion, an excellent foundation on which to build a constructive public relations program in the difficult years that lie immediately ahead.

Opinion Research and the Future

Railroading is an exact business; a science rather than an art; it cannot be otherwise with so many lives and so much property at stake.

The management which railroading produces must likewise be scientific and exact, basing its policies and decisions on facts rather than on fancies; on knowledge rather than on personal intuition. But the major problems confronting railway management revolve largely about what people know and think and do about railroads.

Therefore railway management has the choice of depending on hunches, guesswork and generalizations to guide its course or employing the young but lusty science of opinion research to help it formulate sound policies. The experience of the Southern with this new tool of management illustrates how it can be employed profitably by a railroad.

Engineers Put Curve Reduction on a Sound Scientific Basis*

Set up procedure to evaluate economies in train operation, over and above increased safety and passenger comfort and improved competitive conditions

THE objectives generally sought through a reduction in the rate of track curvature may be summarized as follows: (1) Increased speed at which trains may be operated over the curve to achieve faster schedules; (2) increased riding comfort for passengers; (3) operating savings through increased fuel economy and reduction in the wear of rail, brakes, wheel flanges, etc.; and (4) increased speed at which trains may be operated over the curve, for the purpose of conserving or accumulating momentum, so that trains of heavier tonnage can be operated up a ruling grade on or at some point beyond the curve.

Usually, in the case of any particular curve revision project, one objective predominates and the revised line is operated in a way which will bring about those results which most nearly attain that objective. Therefore, the particular method of operation employed must be used as a basis in evaluating each of the other results of the revision. For example, if, after the degree of a curve has been reduced, trains are operated over it at much higher speeds than formerly, it must be expected that this increase in speeds will somewhat offset the operating savings that would be secured if a lower speed were maintained.

Faster Schedules

Reduction in the rate of curvature is probably undertaken more often for the purpose of making possible faster schedules than for any other reason. This has resulted, quite naturally, in recent years, from the increasing emphasis placed on fast freight schedules and the widespread introduction of high-speed passenger trains which, to be used effectively, must be matched with high-speed track.

The advantages of faster schedules, both passenger and freight, are unquestionably great from the standpoints of increased revenues and improved competitive status. To enable traffic department officers to evaluate these advantages in proposed curve revisions, the engineer must make an accurate determination of the saving in running time which will be secured. This can be done best by plotting a velocity profile by the method adopted by the association in 1943 and appearing in its Manual of Recommended Practice, beginning on page 16-53.

The saving in running time obtained by a reduction in the degree of a curve, of course, varies widely according to the particular features of the project. However, it should be remembered that, from the standpoint of improvement in schedules, a curve reduction which effects a saving of only one minute in the running time of a high-speed passenger train, is equivalent to a reduction of more than a mile of distance.

Sharp curvature is objectionable from the standpoint of passenger comfort because of several disagreeable effects that it has on the movement of the train. In entering a curve, there is often a lurch as the car trucks adjust themselves from the tangential to a radial position, and the outer wheels acquire the superelevation of the curve.

This effect is, of course, minimized by adequate spirals, which, according to A. R. E. A. recommendations, should be long enough to limit the rate of increase of superelevation to not more than 1.25 in. per sec. for the faster train speed involved.

For many years railroad curves were located with no provision for spirals, and because of the physical limitations of bridges, etc., it is often impracticable to throw the track sufficiently to introduce transition curves of proper length.

Other effects noticeable to passengers on trains traversing a curve are the slope of the car caused by the superelevation, and the centrifugal force. The ideal situation produces a condition of equilibrium between the centrifugal force and the superelevation; however, the actual superelevation provided must usually be a compromise resulting from the difference between the passenger and freight train speeds. Passenger trains, therefore, operate above the equilibrium speed, with the

*A report presented before the forty-fourth annual meeting of the American Railway Engineering Association in Chicago on March 14-16, by a subcommittee of which J. A. Erskine, bridge draftsman, C. R. I. & P., was chairman.

result that there is a more or less unbalanced force. On the other hand, when it becomes necessary to slow down or stop on the curve, the slope toward the lower rail is very pronounced. Even when equilibrium speed is maintained, a person walking in the train, or holding an object, must compensate for the centrifugal force. This is observable in the angle at which dining car waiters hold their trays while trains are rounding curves; but passengers are often less expert, with unfortunate results. In addition to the above effects, sharp curvature detracts from the riding qualities of a line by necessitating a reduction in speed. Especially when brakes are used, to make the best possible time between curves, the alternate deceleration and acceleration are disturbing to passengers. These effects are proportional to the degree of curvature, and to the square of the speed. When speeds are raised to improve schedules, and superelevation is made higher to preserve safety of operation, they become increasingly important.

The value of passenger comfort is an indeterminate factor, but it is, no doubt, considerable, especially when that feature of train travel is stressed in a railroad's advertising.

Operating Savings

In the Proceedings of the association, Vol. 39, 1938, page 518, a method is presented for determining the values of rise and fall, distance and curvature in minor line and grade revisions on operated railways. Applied to rate-of-curve revisions, the method calls for the following procedure:

(A) Establish a base period of normal operating expenses, from which the unit cost of the various items of expense can be developed.

(B) Adopt the unit of 1,000 gross ton-miles for all items of expense affected, except wages of crew and fuel. For these two items use the train-hour as the unit.

(C) Develop the cost per unit by primary accounts maintenance of way and structures, maintenance of equipment, and transportation.

(D) Develop the per cent affected for each item for curves of the several degrees involved.

(E) Develop the cost per unit affected for curves of the several degrees involved.

For the purpose of solving problems involving reduction in rate of curvature, only those items affected by curvature need be considered. Table 1 lists these items, together with representative unit costs, and the percentages applicable to various degrees of curvature. These figures are extended for an example wherein a 10-deg. curve is reduced to a 1-deg. 30-min. curve, the central angle being 30 deg. This change is of somewhat greater magnitude than is found ordinarily in projects for reductions in rate of curvature, and is intended merely to provide a pronounced illustration of the effect on costs of operation.

Table 1 is based on freight traffic only; however, if the traffic warranted doing so, a similar table could be set up for passenger traffic.

The items included in Table 1 are those to which the unit of 1,000 gross ton-miles is applicable. Thus, savings in crew wages and fuel are not included, as these are dependent on savings in time, and should be computed separately on that basis. To do this, the reduction in running time would be computed by the velocity profile method heretofore referred to. Savings in the wages of crews would be obtained only for those trains which had overtime schedules, and the savings would be proportional directly to the reduction in such overtime.

Fuel consumption is a function of two factors, one being the amount of energy expended in overcoming train resistance, and the other the heat losses that depend on the length of time the locomotive is under steam. Train resistance caused by curvature has been found to be approximately proportional to the degree of curva-

Table 1.—Effect of Degree or Curvature on Maintenance Costs

Note: This table applies to any rate-of-curve reduction. When a rate-of-curve reduction makes increase in train tonnage possible, use Table 2 in addition to this table.

		General Data								Example			
			Per Cent Effect per Mile of Curve							Effect per mile of Proposed 1° 30′ Curve		Effect per mile of Present 10° 0′ Curve	
Acct. No.	Item of Expense	* Aver. cost per 1,000 gr. Ton-Miles	1°	2°	4°	6°	8°	10°	12°	Per Cent	Amount	Per Cent	Amount
	Maintenance of Way and Structures												
201	Superintendance	$.02438	1	3	10	20	30	40	50	2.0	$0.00049	40	$0.00975
212	Ties	.02327	1	3	10	20	30	40	50	2.0	0.00047	40	0.00931
214	Rails	.02137	10	30	100	200	300	400	500	20.0	0.00427	400	0.08548
216	Other track material	.01963	1	3	10	20	30	40	50	2.0	0.00039	40	0.00785
218	Ballast	.01670	1	3	10	20	30	40	50	2.0	0.00033	40	0.00668
202	Roadway maintenance	.05131	1	3	10	20	30	40	50	2.0	0.00103	40	0.02052
220	Track laying and surfacing	.07189	1	3	10	20	30	40	50	2.0	0.00144	40	0.02876
208	Bridges, trestles, culverts	.02213	..	..	1	2	3	4	5	..	.....	4	0.00089
	Total M. W. & S.										$0.00842		$0.16924
	Maintenance of Equipment												
308	Steam locomotive repairs	.20093	2	5	20	40	65	90	115	3.5	0.00703	90	0.18084
314	Freight train car repairs	.19572	2	5	20	40	65	90	115	3.5	0.00685	90	0.17615
326	Work equipment repairs	.00968	2	5	20	40	65	90	115	3.5	0.00034	90	0.00871
302	Shop machinery	.01678	2	5	20	40	65	90	115	3.5	0.00059	90	0.01510
304	Power plant machinery	.00237	2	5	20	40	65	90	115	3.5	0.00008	90	0.00213
	Total M. of E.										0.01489		0.38293
	Total all items										$0.02331		$0.55217
	Data for example												
	Degree of curve—1° 30′ reduced from 10° 0′												
	Central angle of curve										30° 0′		30° 0′
	Length or curve in feet										2,000		300
	Length of curve in miles equals ratio to expense per mile										0.379		0.057
	Maintenance cost per 1,000 gross ton-miles chargeable to curve										$0.00883		$0.03147
	Volume of traffic (thousands of gross tons annually)										7,300		7,300
	Annual maintenance cost chargeable to curve										$64.46		$229.73
													64.46
	Annual maintenance saving for reduced degree of curvature												$165.27

* Data from records of a certain Class I railroad for the year 1929

ture. As the length of a curve varies inversely as the degree, it will be seen that the total energy expended in overcoming the resistance of a curve remains the same regardless of the degree. However, some saving in fuel should result from those factors of fuel consumption which depend on the factor of time. This saving may be estimated as one-half the saving in time (expressed in hours), multiplied by the per-hour unit cost of fuel for each class of train considered.

In addition to the savings which have been discussed above, rate-of-curve reduction produce a slight advantage in distance. For example, if, as in the illustration above, a 10-deg. curve with 30 deg. of central angle is reduced to a 1-deg. 30-min. curve, about 40 ft. of distance is eliminated. This length is small for any single curve, but where a considerable number of rate-of-curve improvements are made on one line, the cumulative saving in distance would be of significant value.

It will be seen in the example in Table 1 that the operating saving amounts to only $165.27 annually. Ordinarily, this saving would not be greatly increased if the items of wages and fuel were included. The difficulty, of course, lies in the increase in the length of the curve as the degree of curvature is reduced.

Speed restricting curves are often situated on or near ruling grades. By reducing the degree of such curves it is sometimes possible to increase the permissible speed of trains sufficiently to operate that part of the line as a momentum grade, with a resultant increase in the maximum tonnage of freight trains.

To determine what economies may be secured by a curve revision of this kind, a detailed study must be made of the movement of traffic over the existing line, as compared with the operation which would be possible with the revised line. To do this, a period should be selected which is representative of present operation, with respect to volume and nature of traffic. The train sheets for this period should then be examined and a tabulation made, including the direction, tonnage and time of movement of each freight train, and the total train-miles run for the subdivision affected.

Meanwhile, velocity profiles for the line, as it is proposed to be when revised, should be constructed, showing what increase in tonnage would be possible, and the time required for trains of that tonnage to operate over the subdivision. With this information, and the assistance of operating men familiar with the territory, it is possible to set up a comparative schedule of operation, covering the same period as was studied for actual operation, but based on the possibilities of the proposed line. An estimate can be made of the number of freight trains that would be eliminated, and the percentage reduction in train-miles that would result.

Also, it is necessary to develop the unit cost per 1,000 gross ton-miles for those items of expense that are affected by reduced train mileage. The saving in each of these items of expense can then be estimated on the basis of the percentage reduction in train mileage. These savings, multiplied by the annual traffic, expressed in thousands of gross ton-miles, give the annual savings.

Table 2 is an example of the computation of savings for a curve improvement of this kind. It will be noted in this example, that, whereas the reduction in train mileage is assumed to be 4.7 per cent, the savings in the various items of expense are estimated at somewhat smaller percentages. This difference is introduced to take account of the fact that, with increased average train load, there is some increase in fuel consumption and in repair costs per locomotive-mile. There is also the possibility that with heavier trains, more overtime will occur, so that crew wages will not be reduced quite in proportion to the saving in train mileage. The selection of the percentage savings to be applied to each of the various accounts must depend upon the consideration of all of the factors involved in each particular case.

A curve revision which increases the tonnage rating of a line has the same effect as a grade reduction, and, as shown, the savings secured may be considerable.

Table 2.—Example of Savings Produced by Reduction in Number of Freight Trains as Result of a Rate-of-Curve Reduction at a Ruling Grade

Assumptions:

Gross tons moving annually over line (thousands)	7,300
Length of district affected (miles)	105
Gross ton-miles annually (thousands)—7,300 × 105	766,500
Maximum train tonnage prior to curve reduction	4,300
Maximum train tonnage after curve reduction	5,000
Number of freight trains required annually prior to curve reduction (from count for representative period)	2,190
Estimated number of freight trains that would be eliminated annually by curve reduction	104
Percentage reduction in number of freight trains 104 ÷ 2,190 × 100	4.7

Costs per 1,000 gross ton-miles are from the records of a certain Class I railroad for the year 1929.

Computation of Savings

(1) Acct. No.	(2) Item of Expense	(3) Average Cost Per 1,000 Gross Ton-Miles Prior To Curve Reduction	(4) Saving per 1,000 Gross Ton-Miles Based on 4.7 Per Cent Reduction in Number of Train-Miles: Savings Per Cent	(5) Saving per 1,000 Gross Ton-Miles Based on 4.7 Per Cent Reduction in Number of Train-Miles: Dollars
	Maintenance of Equipment:			
308	Steam locomotive repairs	$0.20093	3.	$0.0060279
302	Shop machinery	0.01259	3.	0.0003777
304	Power plant machinery	0.00178	3.	0.0000534
332	Injuries to persons	0.00063	3.	0.0000189
	Total—M. of W.			0.0064779
	Transportation:			
392	Train enginemen	0.08704	4.	0.0034816
394	Fuel for train locomotives	0.07207	3.	0.0021621
397	Water for train locomotives	0.00838	3.	0.0002514
398	Lubrication for train locomotives	0.00331	4.	0.0001324
399	Other supplies for train locomotives	0.00161	4.	0.0000644
400	Enginehouse expense	0.02411	4.5	0.0010849
401	Trainmen	0.09699	4.	0.0038796
402	Train supplies and expense	0.02378	2.	0.0004756
	Total, Transportation			0.0115320
	Total, all items			$0.0180099
	Total annual saving ($0.0180099 × 766,500)			$13,804.59

Conclusions

(1) Faster schedules, improved riding qualities, and safety are generally the principal benefits of curve rate reduction. The money value thereof is usually indeterminate, but it may be large for lines on which high-speed trains are necessary or desirable.

(2) Curve rate reductions which do not increase train tonnage produce relatively small savings in operating expense. These savings may be estimated by the method illustrated in Table 1. In such cases, the objective probably is not operation at lower cost, but rather the production of faster and better service for the acquisition, retention and enlargement of net revenue.

(3) Alinement situations may exist where curve rate reductions could be so located that train tonnage would be increased, and substantial savings in operating expense secured thereby. These savings may be estimated by the method used in Table 2.

(4) Frequently, justification of curve rate reduction must rest upon considerations other than the cost of the change as compared with the operating savings resulting therefrom. In these situations, the necessities of competitive conditions may dictate improvement of the physical characteristics of a line for the purpose of holding or increasing patronage.

Fred G. Gurley Assays the Future

Santa Fe vice-president urges weight and delay reduction, concern for public opinion, in Pacific Railway Club address, of which this article is a condensation

WHAT is the principal reason the railroads have been able to measure up during this war? It is because for almost twenty years prior to Pearl Harbor they had expended hundreds of millions of dollars annually for facilities which improved their efficiency and increased their capacity. Statistics comparing maintenance expenditures for the second of these two decades with previous expenditures were at times interpreted as indicating a substantial lowering of maintenance standards. A decrease in the number of units of rolling stock was taken to indicate less transportation capacity. These assumptions proved to be in error.

It was overlooked that the equipment and facilities built in modern times, and the better materials used in maintenance, required less man-hours for maintenance than were necessary with older facilities and equipment. The new locomotives and cars were capable of greater production per year. New methods of maintenance were more effective.

Tare Ratio Too High

We are proud and thankful for past accomplishment, but we must continue to make technological improvements. I commend a greater appreciation of the advantages of reducing to a minimum the needless weight transported. In 1938 of all tonnage pulled by locomotives on Class I railroads, only 40 per cent of the total represented the weight of the contents of the cars. For every ton of lading carried by the railroads, the locomotives were required to exert energy sufficient to pull 2½ gross tons. In 1943 this percentage had increased to 47 per cent.

The railroad is unique in that it combines in one operation the flexibility and convenience of the individual car with the economy of mass movement in trains. Other methods of land transportation employ vehicles which move as individual units. Railroad cars must be built to meet the stresses imposed by mass movement; they will inevitably weigh more than units of the same cubical capacity designed for separate movement. The weight of the car is not altogether responsible for the figures on net lading I have mentioned, because many cars are moved empty. There are many "special type" cars for which it is difficult or impossible to secure a return load. Tank cars are an outstanding example. Nevertheless, considering that in prewar 1938 contents of cars comprised only 40 per cent of all tonnage, there is room for improvement. Much of the improvement in the relationship of net to gross tonnage in 1943 over 1938 was produced by heavier loadings per car.

The amount of freight in a car is controlled more often by commercial factors than by carrying capacity. So, generally speaking, heavier loading per car must be accomplished by persuading the shipper and the receiver of freight to adjust their commercial relationships. California shippers have been particularly helpful in the past few years. For example, normally only 30,000 lb. of potatoes are loaded in a car. Shippers have increased this 20 per cent, or to 36,000 lb. The previous standard load of oranges was 462 boxes, weighing slightly more than 39,000 lb. This has been increased to two higher standards, one of 561 boxes weighing almost 48,000 lb., and another of 693 boxes weighing almost 59,000 lb. The latter is an increase of about 50 per cent.

There are high-tensile low-alloy steels which make possible a reduction in the weight of freight cars. The steel companies have coined different names for these metals. One well known trade name is "Cor-ten." The standard 40-ft. box car built of conventional structural steel will weigh about 45,000 lb. We can build a 50-ft. box car with these steel alloys which weighs slightly less than the 40-ft. car built of normal structural steel. Under existing circumstances we may purchase cars of these steel alloys at no greater cost than the cost of a car of corresponding dimensions built of normal structural steel. This is because, with the stronger steel, a less amount is required. So long as these conditions prevail I am sure that light weight cars will be purchased.

Cost is very important and, in many instances, controlling. This always will be so when economics are the dominating influence. In my opinion railroads cannot under existing circumstances afford to build freight cars entirely of aluminum or high priced alloys such as stainless steel. I say this despite the fact that both of these metals have been used in the construction of some passenger cars.

I believe passenger cars must be designed and built with due regard for future competition from other modes of transportation. Airplanes will, of course, always be able to move faster than trains, but trains can operate at higher average speed than today, although I do not believe that within the predictable future there will be any appreciable increase over the existing maximum speed of approximately 100 m. p. h.

How to Improve Passenger Cars

The railroads are able to offer comforts and conveniences for passengers which may not be found in either the airplanes or highway vehicles. In building cars, we must take into consideration even more than we have in the past the things which contribute to the comfort and convenience of passengers. I anticipate that we will find electronics useful in the control of temperature in air-conditioning; as time goes on this will be found to add substantially to the accuracy of the control of this important convenience.

On the Santa Fe we operate cars built both of stainless steel and high-tensile low-alloy steels. A recent car has been built by the Pullman Company to provide increased sleeping car comfort at a low charge—accomplished with a substantial reduction in car weight. It is identified as the "Duplex Roomette" and contains 24 roomettes, the charge for which is approximately 10

per cent more than for a lower berth. This car is built of high-tensile low-alloy steel, is air-conditioned throughout and weighs 67 tons—about 11 tons less than the familiar non-air-conditioned sleeper comprising 12 sections and a drawing room built of conventional structural steel.

Just before the War Production Board stopped the construction of passenger equipment, we had an experimental chair car built at the plant of the Consolidated Steel Company in Los Angeles. It utilizes a springing system which differs radically from that employed in conventional design. It is as though the car rested on its four side bearings, the center plates being removed, and the side bearings being so tall that their height above the rail is greater than that of the center of gravity. These tall side bearings, instead of conventional rigid construction, are made of tall coil springs to support the body yieldingly against irregularities in the track surface. The point of support of the car body at the so-called tall side bearings being higher than the center of gravity, the car banks against the overturning action of centrifugal force, and the body swings much as a pendulum would under similar circumstances. The bottom of the body moves outward on a curve and the top moves inward. Improved riding qualities when rounding curves are obtained.

Barriers to Greater Speed

The railroad business being to move people and commodities from one place to another, the amount of time devoted to the task is important. If cars may be moved from one place to another in less time than formerly, a reduction can be made in the equipment needed. This has been one of the reasons that we have been able to operate successfully with less equipment during this war than during World War I.

The ultimate limiting factor in railroad speed is imposed by centrifugal force—which is to say that the curves control our maximum speed. They control the speed not only on the curves themselves, but also on tangent. The comparatively short distances between curves do not provide opportunity for acceleration and deceleration. I do not know how fast we can run on a straight railroad free of highway crossings, but it would be far faster than any speed we have attained.

Modern passenger equipment is designed and constructed so that it may be operated up to the maximum speeds permitted by the track structure; but with few exceptions freight train cars are not so designed. The principal need to permit an increase in maximum speed of freight trains is an improved freight car truck, available at the prices we have come to expect from mass production methods.

The force of economics has been more pronounced in its effect upon freight train speed than in the case of passenger trains. For years, however, we have been increasing the speed of freight trains. The cost of doing these things must be commensurate with the advantages obtained. Stabilization of freight train schedules is important. It is desirable that the shippers of agricultural products from the different areas of the fertile valleys of California should know definitely when their produce will reach a given market. When we consider time in transit, I think of those men on horseback who carried Lincoln's inaugural address from St. Joseph to Sacramento in a little more than seven days. If some of those horsemen of 84 years ago should come back today, I wonder if they would not lift an eyebrow to learn that at this time seven days is our freight train schedule between the Missouri river and California.

There is substantial opportunity in overcoming the causes for slow-downs and stops between terminals, and in conditions which result in freight trains standing in terminals an undesirably long time. Most railroads years ago discontinued the practice of changing engines at every terminal; but on most railroads caboose cars are changed at each terminal. Frequently that is the cause of delay. At terminals where engines run through there is opportunity for saving time by improvements in arrangement of fuel and water facilities. In many cases the rate of water delivery to steam locomotives is not more than 3,000 gal. per minute. It ought to be 5,000 or 6,000 gal.

Public Opinion Affects Transport Costs

The greatest force is that of public opinion. We are affected and controlled by it, and we in turn may influence it; there you have a cycle. If we satisfy the American people and they continue to believe that our services are desirable and economical, public opinion should be with us. On the other hand, if public opinion goes against us, it will be difficult for the railroads to do what should be done.

This is so because there are many decisions made by public opinion which control our destiny. Many of these decisions have to do with equality of treatment between competing forms of transportation.

It may be anticipated that following the cessation of hostilities there will be state and national movements for laws which advocates will claim are for the improvement of the public safety and the safety of employees and travelers upon the railroads. Beware of them. Upon analysis, many of the ideas being advanced would add needlessly to the cost of railroad operation. We must avoid needless costs as we must continue to eliminate needless weight.

San Francisco has an outstanding place in the history of transportation. I think that nowhere in our country has a community so stimulated and inspired modes of transportation. I doubt that any community has been so influenced and affected by transportation.

Transportation and Sectional Interdependence

Shortly before the construction of the first line of railroad between California and the other railroads which had by that time reached the Missouri river, there was a development which symbolized how the railroads were destined to play a great part in that phase of our national life in which we have our strength, but would be a fatal weakness if it were not for strong lines of communication. I refer to interdependence of various parts of our country upon other parts, and the contributions of one section to other areas.

Even before the first railroad to the Pacific was built a federal law was passed, requiring that its grades and curves should not exceed the grades and curves of the Baltimore & Ohio Railroad. The maximum gradient on the Baltimore & Ohio was 116 feet per mile. Although those conditions obtained almost 3,000 miles from the mountains of California, that is how we came to have rather commonly in Far Western territory the maximum grade of 2.2 per cent. We had this early demonstration that—through the medium of the railroads—ideas, standards and the fashions of one part of our country may be quickly established elsewhere.

Today the physical interlacing of the rails throughout the country is no more pronounced than the interlacing of commercial and agricultural relationships in which railroad freight rates are such an important part.

Pullman, Inc., in '43

IN the dual wartime role of armament producer and transportation medium, the Pullman group of companies in 1943 delivered more military and civilian passenger-mileage than in the three prewar years 1938-40 combined, and produced 200 per cent more arms and essential rail equipment than the organization's total manufacturing output in the heaviest peacetime year, David A. Crawford, president of Pullman, Incorporated, informed stockholders in his annual report. During the year, he said, the Pullman Company's sleeping cars delivered 26,000,000,000 passenger-miles of military and civilian service, by far the higest ever recorded, and the Pullman-Standard Car Manufacturing Company produced $273,600,000 in vital military and transportation equipment, 44 per cent more than the record-breaking 1942 total.

Although the Pullman fleet of cars represented only about 11 per cent of the normal passenger-carrying capacity of all railway passenger carrying equipment, the report continues, Pullman carried approximately 30 per cent of the total passenger-miles of traffic of all American railroads during the year. At present, troop movements are requiring approximately half of the regular Pullman fleet, plus government-owned troop sleepers operated by Pullman, with the result that Pullman is currently furnishing approximately 85 per cent of the cars requested by the military services for long-distance troop movements.

Postwar Aims

The gross 1943 income of $426,400,000, the report states, was the highest on record but taxes required a record total of $50,844,157 of the pre-tax net income. As a result, net earnings amounted to $9,240,235, as compared with $9,479,510 in 1942, when gross income was $303,675,994. Of the total net earnings, the sleeping and parlor car business accounted for $4,320,467 and the manufacturing activities for $4,644,572. Revenue from Pullman cars for railroads reached an all-time high, the provision for contract revenue payments to railroads amounting to $26,887,573. This compares with $13,569,687 in 1942.

One of the most serious challenges the railroad industry will face after the war will be in the field of passenger transportation, the report states. Rail-Pullman aims in the postwar era, the report points out, are to continue the prewar program of modernization of rolling stock, track and terminal facilities so that railway travel will be faster, more comfortable and luxurious; to develop new market levels by offering rate attractions; and to reinvigorate old customer services and introduce new ones.

For its part, the Pullman Company intends to be ready with plans for improved cars and service to participate in the postwar travel market, unless as a result of conditions growing out of the pending anti-trust case it should become impossible for Pullman to continue in an effective way its ownership and management of that part of its business.

The Influence of Research

"Much of Pullman-Standard's peacetime research has found application in its wartime production, and likewise, much of its research to improve the quality and quantity of its war products will prove useful in postwar manufacturing activities," the report states. "In time, we look for the improved techniques and new developments of the war period to influence many phases of railroad equipment and operation. In the equipment field we may see such developments as:

"Increased installation of streamlined, air-conditioned trains, built of new and stronger alloys of steel and of the 'light metals.'

"Freight cars of lighter weight, carrying greater revenue loads and designed for rapid loading and unloading.

"Smoother riding of high-speed trains by greater use of shock-absorbing installations in the running gear; better spring suspension and other truck details, with greater use of roller bearings to permit higher speed operation without danger from hot journals.

"Improved types of sleeping car accommodations; better air conditioning, including heating, cooling, humidity control and air circulation; improved lighting, better seating arrangements and more decorative features in all classes of passenger-carrying cars.

"Radio communication for train crews and radio telephone service for passengers; television receivers in club and lounge cars; radio receivers, inaudible to other passengers, in individual accommodations."

TRAFFIC AND OPERATING STATISTICS

COMPARATIVE STATEMENT FOR YEARS ENDED DECEMBER 31

ITEM	1939	1940	1941	1942	1943
CARS OWNED	7,052	6,901	7,048	7,121	7,766†
CARS OPERATED	5,100	4,990	5,303	6,368	7,096
CAR MILES	825,745,133	820,386,700	878,057,274	1,071,254,181	1,222,676,452
REVENUE PASSENGERS:					
Berth	11,549,947	11,077,546	13,166,554	21,008,309	26,561,931
Seat	4,105,188	3,687,770	3,744,167	5,054,240	6,069,968
TOTAL	15,655,135	14,765,316	16,910,721	26,062,549	32,631,899
REVENUE PASSENGER MILES	8,485,399,123	8,213,878,992	10,070,406,876	19,071,589,061	25,891,465,679
OPERATIVE REVENUE*	$ 60,664,266	$ 60,143,649	$ 67,040,587	$ 99,722,785	$ 124,960,365
Average per Car Operated	$ 11,894.95	$ 12,052.84	$ 12,642.01	$ 15,659.99	$ 17,609.97
EXPENSES**	$ 58,573,975	$ 57,899,790	$ 65,307,638	$ 93,235,511***	$ 120,639,898
Average per Car Operated	$ 11,485.09	$ 11,603.16	$ 12,315.23	$ 14,641.25	$ 17,001.11
NET CARRIER EARNING§	$ 2,090,291	$ 2,243,859	$ 1,732,949	$ 6,487,273***	$ 4,320,467
TRAFFIC AVERAGES:					
Average Operating Revenue per Passenger	$ 3.88	$ 4.07	$ 3.96	$ 3.83	$ 3.83
Average Net Garrier Earning per Passenger	$ 0.13	$ 0.15	$ 0.10	$ 0.25	$ 0.13
Average Net Carrier Earning per Car per Day	$ 1.12	$ 1.23	$ 0.90	$ 2.79	$ 1.67
Average Mileage per Car Operated	161,914	164,396	165,577	168,225	172,305
Average Journey for Passenger (Miles)	542	556	596	732	793
Average Miles per Car per Day	444	449	454	461	472
Average Loading per Car (Passengers)	10.28	10.01	11.47	17.80	21.18

* From all sources after deducting contract revenue payments to Railroads.
** Including allocated portion of Federal taxes on income.
*** After appropriation of $2,500,000 to reserve for post-war re-adaptation of Pullman equipment.
§ After provision for Federal taxes on income.
† Including 645 special Government-owned troop and kitchen cars installed late in 1943 and operated for Army Transportation Corps.

After-War Locomotives and Cars*

Challenging suggestions of improvements both specific and general—Handicaps to progress discussed

By K. F. Nystrom,

Mechanical Assistant, Chief Operating Officer, Chicago, Milwaukee, St. Paul & Pacific

THE American railroads came out of World War No. 1 in chaos and we are now feeling the strain of World War No. 2. We entered the first war fairly stabilized as far as motive power was concerned but rolling stock was going through a period of transition from wood to steel. A good deal of our troubles in those days were due to wooden cars and the earlier steel underframe cars being mingled with the newer steel cars.

At the end of the second war we will have to go through a transition period both in motive power and rolling stock if we expect to meet the keen competition with other forms of transportation. Unless mechanical officers on American railroads create faster, lighter and safer motive power and rolling stock at lower first cost and at reduced maintenance costs, other forms of transportation will make heavy inroads on railroad transportation and it means the survival of the fittest. It does not take a prophet to make this statement as we have the stark facts facing us now. Will we, as railroad mechanical men and railroad supply men, meet this challenge? The problems can only be solved with cold, practical, economic facts based on sound engineering, traditional American ingenuity and the determination to serve the country in the transportation field at a lower cost per mile, or per ton-mile, for the class of service rendered, than any other agency.

When we consider the developments that have taken place in various fields during a comparatively few months of this war and the many researches under way, such as in photo-elasticity, electronics, radiography, lightweight alloys, plastics, aero-dynamics with regard to wind resistance, powder metallurgy, heat treatment of steel, impact values of steel in sub-zero temperatures, and welding and induction heating, a person becomes bewildered and questions whether we had better wait and see what this is all about. Therein lies a real danger. We have no time to wait. We must not stand still but must build and improve on our present foundation.

Future Power and Rolling Stock

I am not very much concerned about passenger- or freight-car bodies being made of plastic in the immediate future, as I know from years of experience that anything radically new takes time to develop and will have to go through various experimental stages, which often take years, before a practical and serviceable design is produced. For that reason, although we must encourage research as much as possible, we must stand now on solid premises and meet the demands of tomorrow by applying and using the best designs and proved products immediately available and which we know will give satisfactory service.

In solving the requirements for motive power and rolling stock after the war, at least four factors should be taken into consideration; first, competition with other forms of transportation as regards safety, utility and comfort; second, obsolescence; third, employment; and fourth, weight and cost.

The first consideration is the keen competition from airlines and highway transportation. The airlines have been greatly benefited by the war and will be in an excellent position to bid for the movement of passengers and merchandise after the war. The highway trucks and buses are being worn out and will, in a comparatively short time, be replaced with new, ultra-modern equipment. This is the competition we will face and it cannot be met with motive power and cars that are up to half a century old.

Obsolescence a "Painful Reality"

This leads to the second point—obsolescence, a fact which, for various reasons, we have not faced squarely, but we now have to look at it as a painful reality. From experience, I can make a definite statement that it is false economy to rebuild old equipment. Under certain conditions there may be justification for improving existing steam locomotives, but to modernize heavy passenger cars that are over twenty-five years old cannot be justified. The same applies with equal force to the rebuilding of freight cars. In my opinion, the percentage for depreciation should be substantially increased so that all motive power and rolling stock would be written down to scrap value within 15 years. The money derived from the depreciation accounts should be earmarked and used exclusively for replacement of such equipment.

Now we come to the third consideration, namely, employment. Economists seem to generally agree that after the war we will enjoy a period of prosperity, but after that the pendulum will swing in the other direction and a depression will follow as a true pattern of America's economic history. We all have faith in America and if the American railroads were permitted to accumulate funds to replace obsolete motive power and cars, it would constitute a mighty bulwark against unemployment in a great number of industries. Many railroads have facilities to build their own equipment, particularly freight cars, which would stabilize the employment on the individual railroads. When railroads build their own equipment, it spreads the overhead over both repair work and the new building program and will, therefore, proportionately reduce maintenance cost as well as the first cost of equipment.

The fourth problem is weight and cost which, in most cases, go hand in hand. The cost of steam locomotives in the past years has been almost doubled. Obviously there is a ceiling for any commodity where the cost will

* An address delivered before the New England Railroad Club at Boston, Mass., on April 11, 1944.

reach an economic limit. The steam locomotive has probably reached this limit and we know that the total weight is running all out of proportion to the adhesive or useful weight. We are becoming weight conscious as far as passenger and freight cars are concerned, but it is even more important to control the cost.

The airplane industries are, of necessity, weight conscious and recently a specialty company ran an advertisement with the caption: "A single pound saved on a plane is worth over $80.00." I do not know the basis on which this statement was made but from studies we have made it appears that, based on a cost of one mill per ton-mile for carrying dead weight in freight and passenger trains and absorbing the extra cost over a period of 16.6 years, we can afford to pay as much as 10 cents per pound of weight saved in a freight car and $1.00 per pound saved in a passenger car or locomotive. It is felt that these figures are conservative, particularly for passenger cars and passenger locomotives, as high speed increases the cost per ton-mile.

The Iron Horse's Harness Too Heavy

What the motive power of the future will be cannot at this time be forecast. Diesel power certainly holds out many advantages but when one reflects upon the great demand for internal combustion engines in other fields, one wonders if we will have adequate fuel supplies. On the other hand, if we survey the recent developments in hydro-electric power and the still untapped possibilities for additional dams which can be supplemented with efficient coal-burning power plants, it seems that an era of extensive electrification of American railroads would not only be within the realm of possibility but also of economy. Diesels and electrification may also have a new competitor if a satisfactory turbine locomotive can be developed.

The poor iron horse has, in the past two decades, been overburdened with too heavy a harness in the form of various devices so that its total weight is all out of control. It is hoped that some individual or company will take real pity on the old faithful horse and put him in a functional harness and get him back in the running. The locomotive builders have left the poor fellow almost entirely alone and have started to raise other animals, namely, Diesels. To accomplish something extraordinary always takes extraordinary effort and I am of the firm conviction that if a determined, courageous effort were made to improve the steam locomotive radically, it would yield gratifying results. The most obvious problems are those of boiler construction, light-weight reciprocating parts and a correlated system of spring suspension. The final outcome of such an undertaking would probably be a high-pressure boiler and steam turbine with direct drive.

Passenger Cars—Don't Wait for Miracles

Considering that passenger cars can be built to operate safely on tangent tracks at 150 miles an hour, passenger locomotives should be designed towards that end, or better still, further studies should be made to determine how far we can afford to go in increasing speed before we have reached an economical and practical limit, taking into consideration the physical condition of a given railroad, the terrain, increased cost of maintenance of rolling stock and motive power and most important of all the rapid increase in power consumed at higher speed. For instance, it will take over nine times as many horsepower to move a given train at 120 miles an hour as at 40 miles an hour.

We do not have the time to wait for something miraculous to happen in connection with new designs, new materials, etc. Nothing will happen which we do not create ourselves. It is our responsibility to be prepared.

Passenger cars have been built weighing less than 100,000 lb. These cars have been in service for several years and have proved in mishaps to be of equal strength to the old steel cars weighing 50 per cent more. To accomplish this in the future, the A. A. R. should clarify its specifications. Cars must be built strictly functional and every part that goes into the cars must be carefully detailed with the object of removing ounces in weight instead of tons.

Some truck designs now in service will meet conditions if carefully redesigned, refinements made and high-tensile steel used. The weight should be less than 30,000 lb. per car set of trucks, including brakes. There is, at the present time, an unusual opportunity, with the introduction of hollow forged axles, to standardize on one type of axle, wheel, roller bearing and roller-bearing box for all future as well as present passenger cars. This, however, can only be made a reality by forceful action of the A. A. R.

The air-conditioning equipment must be improved and the weight reduced. The heating system can probably function as part of the air-conditioning system with only small stand-by heating units or coils to protect the cars from freezing when set out in cold weather. The electrical equipment should be redesigned and 110 volts or higher employed to reduce voltage drop and cut down the weight and expense of heavy copper wires and conduits required for low-voltage current. However, any change in voltage must not be made at the sacrifice of interchangeability with existing equipment. The air brake should be improved to reduce the time and distance required for stopping trains. Liberal use of non-ferrous metals will have to be employed to reduce weight. Plastics and many other materials not heretofore used in passenger car construction will be introduced, particularly for interior finish.

Freight Cars Need a Light High-Speed Truck

The future passenger car must be strictly functional, designed along plain, restful lines, with emphasis on safety, comfort and practical appointments, and still retain its handsome appearance. Particular attention must be given to sanitation. No inaccessible corners or crevices should be tolerated and proper disposal of paper cups, paper towels and other refuse should be arranged for so that the interior of the car could be kept clean and tidy enroute. A lightweight passenger car of this type, with low fare and fast service, will attract the travelling public and help us maintain our rightful portion of passenger travel.

In my opinion, the most urgent need in freight-car equipment is a light-weight, high-speed truck which would be safe to operate at speeds up to 100 miles an hour. If I were called upon to build a high-speed freight-car truck today, for lack of anything better, I would build a plain four-wheel equalized passenger truck of approximately 5-ft. 9-in. wheelbase, either with a cast-steel frame or an all-welded frame built up from plates and sections. The first cost would not be any greater than some of the so-called high-speed freight-car trucks recently introduced, which take care of the oscillation in one direction only.

Some of these trucks are designed to take care of the vertical oscillation by the use of friction members. Friction members obviously create wear, which means increased maintenance cost and, therefore, this type of truck

is only a temporary expedient. There are other types of so-called high-speed freight-car trucks which are designed to take care of lateral oscillation only, but no provision is made to correct the violent vertical oscillation at critical speeds. There is an opportunity for another Jim Brady if he can produce an inexpensive high-speed freight-car truck.

Outside of the poor riding qualities, there are two outstanding weaknesses of present freight-car trucks. The first one is that there is no locking device to keep the trucks and car body together in case of a derailment. The result is that, in a derailment, most damage is done by the car bodies leaving the trucks and piling on top of each other, causing severe damage and undue delay in clearing the line for operation.

The second weakness is the construction of the journal box. While I appreciate that not much can be done without hampering interchangeability, the journal brass could probably be improved by increasing the bearing surface; the back of the journal box, dust guard and, above all, the journal-box lid, can and should be improved if we are going to run fast freight trains. The most aggravating delays we have today are hot boxes. The journal box and component parts are substantially the same as in the last century when introduced as an M. C. B. standard. There is no insurmountable problem in making the present journal box as weather-proof as a roller-bearing box and if that were done I am sure that hot boxes and burned off journals would be reduced to a small fraction of their present number.

Roller Bearings

The benefit of roller bearings for freight cars is a controversial question which will not be discussed at this time. It seems, however, that in view of the universal use of roller or ball bearings in the industrial field, in automobiles, highway trucks, and the growing use of roller bearings under freight cars in Europe, the American railroads at this time should adopt for future use a standard roller-bearing and all details pertaining thereto. If that can be done, I would suggest that consideration be given to adopting only two standard roller-bearing axles. One of these axles would have to be for a car having a load limit on rails of 150,000 lb. replacing the present 5½-in. by 10-in. axle having a load limit of 169,000 lb. The other would be for a car of 200,000 lb. load limit in place of the present 6-in. by 11-in. axle that has a load limit of 210,000 lb. on the rail. Both of these axles should be hollow and designed with 6-ft. 4-in. journal centers and the two boxes made interchangeable.

As there are so many types of freight-car bodies, and the tendency seems to be to create more designs for special loads each year, any detailed discussion would be inopportune at this time. In general, however, we will have to create light-weight designs and here, the same as in passenger-car designs, non-ferrous metals can be used extensively. It appears to be within engineering possibilities to reduce the present weight of the average freight car about 25 per cent by employing high-tensile steel, non-ferrous metals and modern manufacturing methods. The latter would introduce precision methods, at present unknown in the freight-car building industry.

There is a practical limit to the reduction in weight of freight cars where the braking power for loaded and empty cars must be taken into consideration. This problem can be solved by approaching it from one of three angles: First, employ an empty-and-load brake; second, reduce the axle capacity as suggested in connection with roller bearings; third, reduce the limit load. Since Pearl Harbor the American railroads have received wonderful cooperation from shippers in loading cars to their full load limit. However, this has greatly increased wheel failures. Freight cars, loaded to the limit and travelling at high speeds on frozen road beds, subject the wheels to greater punishment than ever before and possibly consideration should be given to reducing the load limit, reverting to nominal capacity of freight cars plus 10 per cent overload, or some other arbitrary reduction.

Handicaps to Progress

We may not be in agreement on the particular opinions which I have outlined; however, I believe we are in accord with the general theme that, if for no other than competitive reasons immediately after the war, improvements in motive power and particularly in rolling stock are urgent necessities. Unfortunately, the Mechanical Division of the Association of American Railroads, as it is now set up, does not lend itself to an efficient general advance in this direction. This is because designing is accomplished on a voluntary basis by committees whose membership is made up of men having little or no time to devote to problems beyond duties on their respective railroads. While it is true that builders have assisted in designs, the net result is that the development of improvements requires too much time. We cannot afford to wait years for light weight modern designs.

The present predicament is further complicated by the nature or the composition of the Mechanical Division of the Association of American Railroads. Therefore, the following suggestions are offered, having in the background the organizations as existed prior to 1918:

(1) Revert to the old practice of separate general meetings for both locomotive and car department officers. Under the present arrangement, attendance of highly specialized officers in these two groups has dwindled. The result is that there has not been a free and adequate discussion before the question has been submitted to letter ballot. To illustrate, from 1898 to 1918, 7½ per cent of all questions submitted to letter ballot were rejected while from 1921-1941 only one half of one per cent were rejected. I attribute this difference to the lack of information imparted to the membership through free and full discussion at the annual meetings.

It is also interesting to note that under the present joint session method, between the years 1937-1941, only 6.9 per cent of all subjects considered pertained strictly to locomotives, as set forth in the table.

Car and Locomotive Subjects Considered at Mechanical Division Meetings, 1937-1941

	Car	Locomotive and car	Locomotive	Loading rules	Total
1937	21	23	7	62	113
1938	35	20	8	47	110
1939	19	13	3	74	109
1940	11	11	4	0	26
1941	18	26	6	0	50
Total	104	93	28	183	408
Per cent	25.5	22.8	6.9	44.8	100

(2) In reverting to the former method of separate locomotive and car sessions, I would also suggest that competent car men, whose duties and responsibilities are confined to car work, be given an opportunity once more to have representation on the General Committee. It is my opinion that the current representation of the same officers for both car and locomotive discussions cannot result in the same aggressiveness as can be obtained from representation by specialists in their respective fields, working in a common effort. This is particularly im-

portant when in emergency cases the General Committee is forced to legislate without letter ballot.

(3) Provide a limit of tenure for membership on the General Committee so as to afford more frequent changes in personnel, thereby bringing new ideas and new enthusiasm into the work.

(4) The General Committee, at the present time, consists of members from larger roads only and represents approximately 52 per cent of the total potential vote which, to my way of thinking, is too much concentration of power. To correct this condition, the committee should either be reduced in number or the present number maintained but some members should be selected from smaller roads.

(5) Inaugurate two permanent engineering staffs under the newly created Research Division of the Association of American Railroads—one to devote its time to the study of improvements in locomotive construction and the other to do the same for freight- and passenger-train cars; the Locomotive Construction and Car Construction committees to act in an advisory capacity.

(6) In the interest of bringing into play personalities having new ideas and new enthusiasms, it seems to me that the chairmen of the technical committees should have a limit of tenure in that capacity and the membership of these various committees should also be limited as to term of service so as to create an opportunity for more frequent changes in personnel. I believe this could be done without detriment to the work of the committees if the changes each year were kept down to two or three members. In this way some very desirable talent would be brought out, which, under the present procedure, is kept in the background.

In conclusion, let me say that this address is made for the purpose of pointing out, to the best of my ability, the problems immediately confronting the American railroads and issuing a challenge to meet them squarely and solve them. If we are humble and thankful to God for the great privilege we have as American citizens and resolve that, regardless of any obstacles, we will use our combined intellect and strength, nothing can remain in our way. In that spirit I hope that this address will contribute, at least in a small way, towards the continued leadership of American railroads in transportation.

Federal Funds for Railway Capital Improvements?

Review of a book by a New Deal economist who urges federal largess throughout the economy—a donation which some "conservative" business interests deem wise when they get it but unsound for wider diffusion

ROBERT R. NATHAN, one of the New Deal's economists, has come out with a book* in which —along with the late National Resources Planning Board—he recommends that the railroads be looked into as an object of government spending to sustain a high level of post-war economic activity. He says:

"We cannot leave this subject [i.e., government spending] without taking cognizance of the proposals made from time to time that government expand its area of control to those fields where private ownership and operation somehow does not provide investment outlets. The railroads are usually given as an example.

"In many countries the government owns the railroads. This certainly is one field in which tremendous expenditures for renovation and modernization are possible. Perhaps the government could somehow provide the funds and have some claims over the railroads' income so that such expenditures could be made without direct government ownership. Other fields for similar consideration include power, communications, forests, and other public utilities and national resources."

This book is an orthodox statement of the "spend-ourselves-rich" school of economics, fathered in England by Lord Keynes, but with many votaries in this country, a large number of them being on the public payroll. Quite likely, there will be spokesmen for business who profess themselves to be strict adherents to the "private enterprise" philosophy who will find fault with most of the contents of this book—but many of them, in so doing, will hardly go so far as to object to a part of its doctrine, to wit, where it is proclaimed that:

"Superhighways are desperately needed all over the country. The Inter-American highway will be a great asset to trade and travel."

It will be recognized that Mr. Nathan's thoughts with respect to superhighways are quite identical with those of the "Automotive Safety Foundation" and other eminent interests affiliated with highway transportation (see *Railway Age* of March 4, page 454). Mr. Nathan does not want his public works to be self-liquidating—paid for by the users. Nor does the "Automotive Safety Foundation" want the proposed donation of several billions it seeks from the federal Treasury for post-war superhighways to be self-liquidating either, but, rather, insists that it be a charge on general taxpayers.

$150 Billion National Income Is Goal

Mr. Nathan, however, is consistent. He has no objection to government "investment" in parts of the economy which some of his "private enterprise" critics would insist be left strictly to private enterprise—although they share with him his advocacy of the partial communization of transportation costs. Mr. Nathan takes as his premise that the depression of the 'Thirties, as well as previous depressions, had their origin in "over-saving"; and that it is the business of the government to hot-house the economy at all times, and to the degree necessary, to prevent such "over-saving" from ever occurring again. He would have the government supplement private expenditures as much as is necessary to prevent the "gross national product" from ever falling below $150 billion a year—and he would raise the funds necessary for such heavy government spending largely by taxes on individual incomes.

* "Mobilizing for Abundance." Published by McGraw-Hill Book Co., N. Y. Price $2.

As for government-owned war plants, he would sell many of these "to other interests than those who are now operating them" in order to break up existing or incipient monopolies—a policy which may be quite painful to many of those who will agree zestfully with what he has to say regarding superhighways.

He defends government invasion of practically any phase of the economy as follows:

"There are areas of competition between government and private industry to some degree today. Almost no one today believes that government operation of schools is undesirable because it is in competition with private schools. Likewise, no one feels that the government operation of the postal system is undesirable because it competes with other means of communication. The same applies to our police forces as compared with private detective agencies or our garbage and trash collection system, or the operation of municipally owned water plants. Those opposed to increased governmental responsibility will say that these services have a special public interest. But isn't it especially in the public interest that we have full employment and prosperity without interruption by depressions?"

Unlimited Government

Those who support the invasion of the economy by government "investment" in highway, waterway and airport facilities—in greater magnitude than users are willing to pay for—on the grounds that these expenditures carry "benefits" to others than direct users, may be warned by the above quotation of the wide implications of general application of their notion that it is the government's business to disseminate economic benefits among the citizenry at the expense of the taxpayers. By logical development of this philosophy of business interests, who refuse to conceive of themselves as socialists and communizers, the government comes to be looked upon as a "residual benefactor" of every citizen. Whatever in the way of material well-being he and other private individuals neglect to provide for him by their own efforts, the government will make available; and none of the traditional inhibitions limiting the functions of government will be permitted to stand in the way. Maximum material prosperity at all times, widely distributed and with little regard to comparative individual merit, is adopted as the primary goal, and interfering considerations are brushed aside.

Expanders, Not Originators, of "Spending"

To Mr. Nathan and other New Deal economists belong the credit for developing this revolutionary political and economic philosophy to its full application—but they did not invent it; they have merely built upon precedents established and sedulously advanced in a narrower field by private business interests who regard themselves as "sound" and "conservative."

Other writers of the "spend-to-get-rich" school have been more explicit than Mr. Nathan is, as to why they deem government coercion to be necessary to push the economy forward. They see further advance by individual effort as halted by monopoly action—labor monopolies as well as business monopolies. These monopolies, according to this view, fix prices below which they will not go—but at which consumers refuse to buy except in depressed volume, thereby causing unemployment. The government *could* restore normal employment and economic progress by breaking up the monopolies, but this is deemed to be politically inexpedient; so the alternative is for the government to accept the monopoly price level and establish economic activity at a high level by coercion, getting the necessary funds for the purpose by taxing away the gains from the high wages and prices established by monopoly action.

In the end, after taxes are subtracted, the monopolists do not have any *net* benefit either in profits or wages—and they have the expense of a large bureaucracy to support. Mr. Nathan does not mention the obvious alternative to the program he advocates (i.e., destruction of monopoly practices), but urges his proposals as the only likely ones to fit post-war conditions. He follows his philosophy frankly, where political expediency would never lead him. That is, for example, he does not favor wage increases which will increase the price of consumers' goods. He wants the benefits of his program channeled primarily into the pockets of the "lower income groups." Hence he favors an increase in social security payments of all kinds, and he urges that these be paid from taxes on incomes, rather than collected from employers and employees. He would largely do away with the taxing power of the states, and would have the federal government do the taxing—later distributing funds among the states according to some rationing formula. He would make the increased burden of income taxes fall primarily on incomes in the $2,000-$10,000 range; would eliminate taxes on corporate incomes paid out as dividends; and would limit taxes on individual incomes to 60 per cent.

This book is a simple and straightforward application of the Keynesian "spending" theory. An able refutation of the Keynesian theory is available in "Post-War Readjustments Bulletin No. 8," issued by the Chamber of Commerce of the United States under the title "Deficit Spending and Private Enterprise," by Dr. L. A. Hahn, who observes:

"Governmental spending alters the distribution in a cold, clandestine and dangerous way. . . . The process leads to a socialization of consumption."

Enlarges a "Conservative" Policy

However—as noted above—this "cold, clandestine and dangerous" program is not copyrighted by Lord Keynes, or Mr. Nathan, or the New Deal. It is precisely the program now pursued, and whose extension is advocated, by "conservative" business interests associated with highway, inland waterway and (to some degree) air transportation.

Mr. Nathan's program differs from that of these "government-spending-where-it-will-help-us" protagonists only to the extent that he would apply their practices to the whole economy, including the railroads.

Superhighways Should Be Toll-Supported

"May I suggest that you might have added to your editorial of March 11 on post-war highways that if the government is expected to finance the construction of these super-highways in whole or in part they should be self-liquidating toll roads. With a debt of 258 billions predicted by the Treasury for the fiscal year ending June 30, 1945, every effort should be made by the federal and local governments only to build such roads, and the motoring public will be glad to pay the tolls if the roads are up to the standard of the Pennsylvania Turnpike.

"With a 30-billion bonus bill already introduced in the House and the possibility that our debt may reach 300 billions before Japan is defeated, we must all try to realize that there is a limit to the credit of even this most wealthy country in the world."

—Howard W. Starr in a Letter to the N. Y. Times

Communication . . .

What Is Proper Basis for Depreciation Charges?

CHICAGO

TO THE EDITOR:

I wish to thank H. R. Smith for his comments on my depreciation article in the April 1, 1944 *Railway Age*. After sticking my neck out for the axe the way I did, it would be disappointing if no one took a whack at me.

Mr. Smith's computations are correct. I find it difficult to disagree with him, except perhaps in his implication that weighted averages change the essential nature of the harmonic average as compared with the arithmetic mean, and that a problem which was set up intentionally (for simplicity) with a weight of 1 (or unity) is unweighted. If Mr. Smith will weight *both* computations in my article by the same amounts, he will find the same essential features present. For example:

(a) The usual procedure:

1 unit; life 10 yrs.—wt. 1 (or 1000) gives 10 (or 10000) wtd. unit—yrs.
1 unit; life 50 yrs.—wt. 5 (or 5000) gives 250 (or 250000) wtd. unit—yrs.

Total weights ..... 6 (or 6000) gives 260 (or 260000) wtd. unit—yrs.

This is equivalent to changing the 1 50-yr. unit to 5 50-yr. units, for which the weighted average life is:

$$\frac{260}{6} \text{ or } 43\tfrac{1}{3} \text{ years}$$

and the reciprocal of 43⅓ gives (neglecting salvage) a depreciation rate of .0231.

(b) The correct group rate is in this instance, .0333 as computed by Mr. Smith.

But the essential comparison must now be made between a rate of .0231 and a rate of .0333. Of course the weighting changes the *absolute* amount of the rate. As Mr. Smith points out all group depreciation rates must be weighted by the *actual* dollars in account covering the units. This fact has not been overlooked in the method suggested at the bottom of page 321 of the *Railway Age* of February 5, 1944. The "depreciation bases" (third from last line) are in these dollars, and the weighted average class-rate (not mentioned or described) is determined from the "amortization" (p. 322) and is thus seen to be properly weighted.

I am really concerned over the last paragraph of Mr. Smith's comments. If the statement that he understands the way he has described is the way service lives are handled to determine rates, means that he does not realize that weighted average lives are employed, yes even required, by both federal and state regulatory and governing bodies, I can only feel that I have failed to make myself clear.

In the first place, industry such as the railroad industry does not have, as Mr. Smith suggests:

Unit	Book value	Annual charge
1		
2		
3		
4		

but

Number of Units	Book value	Annual charge
500		
1250		
2500		
10000		
etc.		

For each of these groups of 10,000, 2,500, etc., units the depreciation must be determined. *The service lives of these units vary widely;* moreover it is impossible to forecast the lives of individual units as I have tried to point out. But actuaries have proved there is a way out. The usual procedure is to assign *a life* to the group and take the reciprocal for the depreciation rate, but an actuary would not do this to determine insurance rates, even if there were no interest question involved.

The point Mr. Smith seems to have missed is that property life established in the usual conference of engineers, statisticians, accountants, or what have you, is perforce an estimate of the weighted average life which these conferees agree applies to the group of units under consideration, and therefore subject to the error of the harmonic average whether or not other errors of estimate exist. These other errors usually do exist and constitute an argument why the error in the average should be disregarded. But two or more wrongs do not make a right. The mathematical error in the harmonic average is one for which the taxpayer should not have to suffer.

Make no mistake about it. The weighted average life must be employed as an expediency measure until it is possible to establish statistically correct depreciation rates the long hard way as actuaries now compute insurance rates. *But those who use the weighted average lives should have no misunderstanding as to the accuracy of the rates they are getting,* and should give them up as tools as soon as more reliable tools are made available.

One condition exists under which the harmonic average and the arithmetic mean give identical group depreciation rates. If the depreciation base approximates the life table in its age-distribution year after year, and finally becomes stabilized (for definition see note, bottom of page 321), it is a matter of indifference whether weighted average rates or weighted average lives are used. Both then give the same group rate. An attempt is often made to justify average lives on this basis. So far as the railroads are concerned, most railroad men who have studied this phase of the problem agree that the depreciation bases of railroad property are highly unstabilized.

G. B. MCMILLEN.

Miss. Central Essay Contest

The Mississippi Central recently sponsored a high school student's essay contest on "How We Can Keep America American," in which it distributed a $100 war bond, a $75 one, a $50 one, and seven $25 ones as prizes. A Yonkers, N. Y., student, Elaine Ryan, won the $100 bond.

In her essay, the first-prize winner said that one way the question propounded could be answered would be "in reverting to the ideas of our founding fathers. Too often, in looking to tomorrow, we disregard the lessons learned yesterday."

Among the sources for the helpful opinions of the founding fathers were mentioned the Constitution and the Bill of Rights therein, particularly the Tenth Amendment; Washington's advice in his Farewell Address on the "spirit of encroachment" in government; and Lincoln's observations on the soundness of private property and the dignity of human liberty. Continuing, the essay says in part:

"This belief in the essential dignity of labor extends back beyond the inauguration of our own government. It is present in the Bible where it is stated, in II Thessalonians, Chapter 3, verse 10: 'And even when we were with you, this we commanded you, that if any should not work, neither should he eat.' The right and privilege of every man to work for himself and his family has been recognized since time immemorial. The Bible further recognizes this by stating, 'But if any provide not for his own, and especially for those of his own house, he had denied the faith and is worse than an infidel.'

"Security programs already inaugurated by our government and comprehensive benefits programs such as the 'cradle to the grave' security plan now being considered are in direct contradiction to this prerogative of human labor. The spirit of enterprise so staunchly upheld by Lincoln has its incentive in real labor. This must not be removed by regimented governmental procedures and legislation which, in providing 'security', creates a false sense of the value of honest toil. Labor becomes almost meaningless. The final outcome of this issue will decide, to a large extent, how well we can keep America American.

"Another ideal subscribed to and believed in by the founders of our nation and a prerequisite of prime importance in keeping America American is that stated by Thomas Jefferson, 'I have sworn upon the altar of God eternal hostility against every form of tyranny over the mind of man.'"

Railroads-in-War News

King Named Executive Assistant to Johnson

Has been associated with director in I. C. C.'s car service work

Homer C. King, director of the Interstate Commerce Commission's Bureau of Service since April, 1942, has been appointed executive assistant to Colonel J. Monroe Johnson, director of the Office of Defense Transportation. The April 10 announcement stated also that Joseph L. White, executive officer, will continue in that capacity, and that Mr. King and Mr. White "will both be closely associated with Colonel Johnson in shaping the future policies of the agency."

Mr. King is expected to function in the capacity of a general assistant to the O. D. T. director while Mr. White continues in charge of administrative matters and statistical services. Mr. King has been granted a leave of absence from the Bureau of Service directorship, his assistant, R. S. Booth, having been designated acting director.

Mr. King was born in Kansas, and began his career as a school teacher in his native state. Thereafter he went to Colorado where he worked at railroad construction, as a cattleman, and on irrigation projects. Meanwhile Mr. King had learned stationary engineering, an occupation which he then followed until he entered railroad service as a locomotive fireman on the Atchison, Topeka & Santa Fe. During World War I he enlisted in the Army and served in France for 18 months with the 21st Engineers, a railroad unit, returning after the war to his former employment on the Santa Fe.

Homer C. King

In 1922 Mr. King entered I. C. C. service as a locomotive inspector, and while thus employed he studied law. He has been a member of the Georgia bar since 1926, and of the bar of the U. S. Supreme Court since 1935. In 1931 he was appointed special examiner for the commission with headquarters at Washington, D. C.; and in 1938 he became assistant director of the Bureau of Service. As noted above, his promotion to the Bureau directorship came in April, 1942.

In that position, as the O. D. T. announcement pointed out, Mr. King "has worked closely with Colonel Johnson in administering the Interstate Commerce Commission's wartime transportation measures." As noted in the *Railway Age* of April 8, page 683, Colonel Johnson remains a member of the commission, retaining supervision of the Bureau of Service.

"Signaling" Editor Promoted from Ranks in M. R. S.

It has been learned from the War Department that Maurice Peacock, Jr., newly commissioned 2nd Lieutenant in the Military Railway Service, Transportation Corps, and former associate editor of "Railway Signaling," was one of six recently promoted "somewhere in Italy" by Brigadier General Carl R. Gray, Jr., Director General, M. R. S.

Alluding to the conferment of the commissions as "one of the most pleasant things I have to do," the general added, "I get a tremendous satisfaction from being able to give their just rewards to men who have earned their honors the hard way." Lieutenant Peacock, who entered the army in May, 1941, had been serving as a Sergeant (T/4) in the communication and signals section. Prior to his joining the staff of "Railway Signaling," he had been employed in signal construction work on the Norfolk & Western.

"Junior War Police" Protection for the Long Island

A "junior police force," to curb stone-throwing and similar acts of juvenile vandalism, is being created by the Long Island, E. L. Hofmann, superintendent, has announced. Known as the "Auxiliary Junior War Police," the organization will work as an adjunct of the railroad's police division.

Already advance volunteer membership of boys up to 16 years of age totals 400. Each member pledges himself "to commit no depredations against property and to do his best to prevent others from doing so."

Key Men Under 26 May Get Deferments

State directors to act under quotas and O. D. T. recommendations

That deferment of a small number of men under 26 years of age who are in key transportation jobs would be permitted under the revised Selective Service regulations designed to speed up the induction of men in this age group into the armed forces was disclosed April 8 by Col. J. Monroe Johnson, director of the Office of Defense Transportation. This statement was amplified by a Selective Service announcement on April 11 setting forth the limited list of war activities within which registrants in the 18-to-26-year age group may be considered as eligible for deferment upon the recommendation of state directors of Selective Service.

To Pick "Key" Men—While state directors are authorized to recommend the exemption of men engaged in the specified activities, even though applications for such exemption are not endorsed by the appropriate government agency, where one has been designated, it was emphasized that the presence of such an official endorsement "should be given weight as strong evidence of occupational necessity." The Office of Defense Transportation, the agency having jurisdiction over domestic transportation activities, already has designated special representatives in each state to work with the state Selective Service directors in processing deferments of key transportation workers.

State directors have been authorized to exempt key personnel of the railroads, Great Lakes and inland waterways, air lines, and motor truck firms, and O. D. T. recommendations will be given weight as to these branches of transportation, it was indicated, subject to such quota limitations as may be approved by Selective Service headquarters in conjunction with the interagency manpower committee at Washington, D. C.

"Recently," said Col. Johnson, "the transportation industry has felt the sudden impact of a concentrated demand for young fighters, and the loss of much skilled personnel for which no replacements are available is threatened. I do not wish to minimize the importance of young, alert fighters in the prosecution of a war, but in order to supply these fighters with everything they need it is imperative that transportation here at home be maintained at a high level of efficiency. In order to do this, transportation must have the necessary manpower, also.

Replacements Not Easy—"In transportation, as in other industries requiring

specialized skills, a new and untried man doesn't fill the place of a man trained and experienced in his work," the O. D. T. director pointed out. "That's why the O. D. T. has insisted on deferment of certain key men." The work of train dispatchers was cited by him as one example of such a specialized transportation occupation. He went on to emphasize that "efforts to recruit and train replacements for key transportation workers needed in the armed forces will be intensified. "Meanwhile," he added, "these key men—particularly those in the older draft-age brackets—are needed in their present jobs if transportation is to continue to 'deliver the goods.'"

That concentration on the early induction of men under 26 would result in a slackening in the drafting of older men "who are making a contribution to essential agriculture, war production, or war supported activities," was indicated in statements by Selective Service Director Hershey, and by the instructions sent state directors of that service to postpone the induction of men 26 and over who are engaged in essential activities, "even though such men have been found acceptable for military service or have been ordered to report for induction or pre-induction physical examination." This postponement was expected to remain effective until substantially all registrants under 26 have been "processed" by Selective Service.

Interest Centers on Freight Trains—At the same time increasing pressure was being put upon men now classified as 4-F to seek employment in essential activities, if not already so employed. The hope was expressed that this would result in the "voluntary recruitment" of large numbers of men now exempted from induction for physical reasons and classed as 4-F for the replacement in essential or war-useful work of men drafted into the services, particularly those under 26.

The recommendations of the O. D. T. will be considered in the exemption by state Selective Service directors of men under 26 in cases of personnel "engaged in railway and motor transport service directly related to the movement of war freight necessary to support the immediate war objectives, the withdrawal of which would decrease the safety, speed, and volume of movement so as to adversely affect such war objectives." Eligible railroad employees were further described as those "engaged in assembly, line haul, and break-up of railway freight trains," while eligible motor transport employees were further limited to "key personnel of those trucking companies whose equipment is more than 16,000 tons gross weight of vehicles." Comparable restrictions were set up for for-hire trucking and for licensed officers in Great Lakes and inland waterways operations. Consideration or airline employees was provided for in the case of flight personnel and of that ground personnel outside continental United States.

Commenting on the foregoing in an April 12 statement, Colonel Johnson said that the occupational deferment plan thus set up should leave in the transportation industry "a small number" of draft-eligible men in the 18-to-26 age group "who have risen to key positions." Meanwhile, he also said, "recruitment of men 26 and over by the transportation industry was given an added impetus by the recognition accorded to transportation," by Major General Hershey.

"The critical manpower situation in transportation has been evident for some months," the O. D. T. director went on. "Recognition of the situation by Selective Service places the recruitment activities for transportation workers in their true position to men and women who are eager to do their bit. It must never be forgotten that war materials must be moved if they are to be of value at the front."

Authorization for Ordering Track Materials

Railroads have been authorized by the War Production Board to place orders for an additional quantity of track materials, up to 20 per cent of approved allocations for such equipment as frogs, switches and other items, to balance an additional quantity of new rail it is anticipated will be allocated to them during the third and fourth quarters of 1944.

The action, covered by issuance of Direction 2 to Preference Rating Order P-142, states that such orders for track materials are not to be confused with track accessories, nor can such orders for track materials be used to obtain any equipment other than to accompany the quantity of new rail which may be authorized for each railroad.

Betterton on Leave from S. P. While Serving with W. P. B.

George M. Betterton whose appointment to the directorship of the Transportation Equipment Division, War Production Board, was announced in the *Railway Age* of April 1, is on leave of absence from his position of general purchasing agent of the Southern Pacific. He took over at W. P. B. on April 1, succeeding Albert C. Mann, who has resumed his former position of vice-president of the Illinois Central.

Mr. Betterton was born February 25, 1886, at Norton, Kan., and entered railroad service in 1904 with the Chicago, Rock Island & Pacific as a clerk at Goodland, Kan.

George M. Betterton

He was soon transferred to Fairbury, Neb., and during the following year he served successively as stenographer, accountant and storekeeper in the motive power department. From 1905 until 1909 he was clerk and assistant chief clerk to the superintendent of motive power, leaving the Rock Island in the latter year to become chief clerk in the motive power department of the Iowa Central (now Minneapolis & St. Louis) at Marshalltown, Iowa.

Mr. Betterton became associated with the Southern Pacific in 1912, serving from that year until 1921 as clerk and chief clerk to the general storekeeper at San Francisco, Calif. From 1921 until 1925 he was chief clerk to the purchasing agent, becoming assistant purchasing agent in the latter year and serving until his promotion to purchasing agent in 1933. He has been general purchasing agent since June, 1942.

March Export Traffic

There were 155,058 cars of export freight, excluding coal and grain, handled through United States ports in March compared with 100,294 cars in March, 1943, an increase of 55 per cent, according to the Association of American Railroads.

Export grain unloaded at the ports totaled 3,041 cars, compared with 5,653 in March, 1943, a decrease of 46 per cent. In addition, the railroads handled 1,480 car loads of coastal freight in March, compared with 521 in the same month last year, an increase of 184 per cent.

The total of 159,579 cars of export and coastal freight, excluding coal, handled through the ports represented an average daily unloading of 5,148 cars, the highest on record. This exceeded the previous high of 4,650 cars established in January and was the first time the average has exceeded 5,000 cars.

New Army-Navy "Consolidating" Station at St. Louis

A seventh "consolidating station" for Army-Navy l.c.l. shipments—the Army's counterpart of the commercial freight forwarder service—was established April 1 at St. Louis, chiefly to relieve the Chicago consolidating station of some of the tremendous volume which it is handling at present.

First of the consolidating stations was started in July, 1942, under control of the Army Transportation Corps. The Navy later asked that it also handle naval, marine and coast guard shipments, and since then the venture has been a joint one with Army Transportation Corps in charge. Other stations are located in New York, Philadelphia, Atlanta, San Antonio and El Paso, and there are similar operations at Memphis, Fort Worth, Ogden and Columbus.

Freight consolidating stations act also as distributing agencies, breaking bulk on consolidated cars and effecting delivery to consignees in adjacent areas. There are additional freight distributing agencies at Seattle, Spokane, Portland, Tacoma, Oakland, San Francisco and Los Angeles. Many direct consolidated cars are forwarded from Army-Navy consolidating stations to larger Army Service Forces, Army Air Forces and Navy installations.

In consolidating stations, which occupy quarters in railroad freight houses, l.c.

shipments from different points of origin are sorted and assembled into full carload lots, thus cutting the freight charges for the government and preventing further re-handling delay. Commodities with the same destination and in the same general tariff rate classification are sent in the same carload shipments. Utilizing all available space in cars, more than 6,000 refrigeration cars, normally empty east to west have been used.

Transcontinental east-to-west shipment time on l.c.l. lots has been reduced. In January, 1943, 22,000 tons of l.c.l. were handled through these consolidating stations; in January, 1944, 57,000 tons.

Drive on Black Market in Tickets Continues

"The drive to stamp out the black market in railroad accommodations is advancing on a nation-wide basis," said an Office of Defense Transportation statement of April 10.

It went on to point out that the Federal Bureau of Investigation last week made arrests in Atlanta, Ga., and Los Angeles, Calif., and that three States have enacted legislation to outlaw the practice. "Speculative reservations of already limited travel accommodations have intensified the difficulties of making the best use of available travel space," it added.

The arrests made by the F. B. I. last week followed the arrests of 35 persons by the federal agents in Miami on similar charges during the height of the Florida season. The three States which have enacted legislation are New York, New Jersey, and Rhode Island, while local ordinances brought about arrests for illegal dealings in railroad tickets in New York City several months ago.

Two of the New York operators have been convicted.

Scott Leaves O. D. T.; Perrin Is Acting General Counsel

Jack Garrett Scott, general counsel of the Office of Defense Transportation since its organization in December, 1941, has resigned to enter the private practice of law in Washington, D. C. The announcement by O. D. T. Director J. Monroe Johnson also said that Frank Perrin, special examiner of the Interstate Commerce Commission's Bureau of Service, had been appointed acting general counsel.

Japs Seek to Cut Railway Operated by U. S. Army

The Japanese invading Assam from Burma, and currently reported in the vicinity of Imphal, are believed to have as their objective the cutting of the Bengal & Assam Railway at Dimapur (see accompanying map).

The U. S. Army Transportation Corps' Military Railway Service, began supervising or operating portions of the Bengal & Assam on March 1. They are under the direction of Colonel John Adams Appleton, T.C., formerly general manager of the New York Zone for the Pennsylvania R. R.

The Bengal & Assam Railway is divided into two distinct operations. A 5 ft. 6 in. gage line extends from Calcutta to Siliguri (the line extending toward Tibet in the upper left in the accompanying map). Branching off from the broad-gage lines at Santahar and Parbatitur are meter-gage lines which run eastward to Ledo.

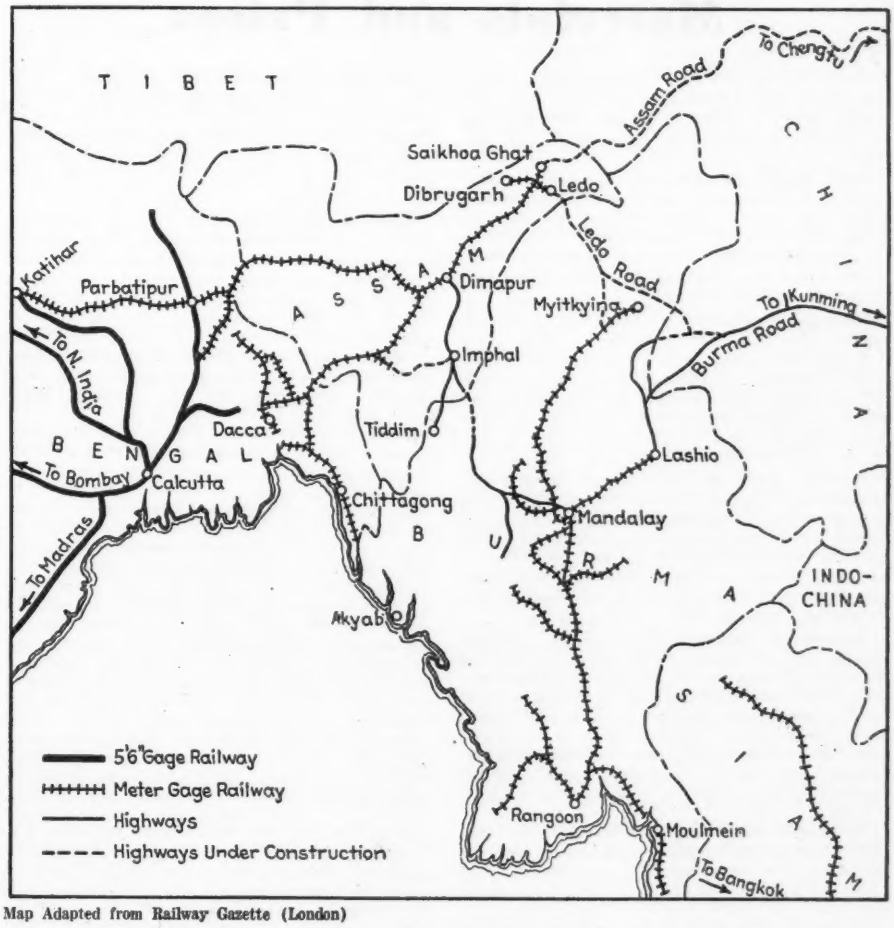
Signal Corps, U. S. Army

Col. John A. Appleton

U. S. Army railroaders, when transplanted from training camps in the United States to India, found the Bengal & Assam line to be, for the most part, in good condition, having a road bed made of stone hand-cracked by native labor. Some of the lines are double-tracked. Although motive power was not impressive, the rolling stock was all-steel, and a few of the cars had vacuum brakes. However, most of the cars had no automatic brakes, and a screw-type coupling was used, in contrast to the European-style hand coupling which has been adopted for all Allied overseas rolling stock.

Many changes have been made by the American railway soldiers. Maximum speed on the line has been stepped up from the former limit of 25 m. p. h. to 40. Cars with standard trucks are replacing four-wheelers. Gondolas have been introduced and are replacing box-cars as coal haulers. Natives are being taught not to use the right-of-way for convenient roads between towns. American locomotives, known in the Orient as "MacArthurs," have been placed in operation. Another innovation has been the elimination of the "brass check" (i. e., train staff) system of train dispatching.

This railway is reported to be a principal supply line for the Chinese and American forces operating in Northern Burma under Lieut. General Joseph Stilwell. "Life" magazine of April 10 stated that the objective of Gen. Stilwell's force is to clear the Japs out of Northern Burma, thereby permit the reopening of a highway supply line into China (presumably via the Ledo road, under construction, and the upper end of the



Map Adapted from Railway Gazette (London)

Where the Japs Hope to Intercept a Line Operated by the American Army Railroaders

Burma road). "Life" observed that cutting this railway, besides its effect on General Stilwell's supplies, might also maroon "China's aerial supply route from Assam over Himalayas."

About 20 Per Cent of Pullman Space Unoccupied

Several hundred thousand additional passengers per year might be carried in Pullman cars if cancellations of reserved space were made more effectively by ticket holders, according to E. P. Burke, passenger traffic manager of the Pullman Company. Although Pullman is already far beyond theoretical capacity limits estimated several years ago, he said, about 20 per cent of Pullman space is unoccupied, with ticket cancellation failures accounting for a substantial portion of this figure.

"In 1940, when Pullman delivered a little more than eight billion passenger-miles, it would have been considered unbelievable that with practically no additional equipment we would be able to deliver 26,000,000,000 passenger-miles in 1943," Mr. Burke said, "but, with intense efforts to meet the unprecedented military and civilian demands, we did deliver that volume.

"The average occupancy per car was increased from 10.01 in 1940 to 21.18 in 1943, and we were able to reach this high occupancy level by applying vigorously every operational efficiency measure that could be employed."

One important step taken by the company, he said, was the filing of an amended refund tariff with the Interstate Commerce Commission. The tariff, which he said has resulted in the actual "saving of several hundred thousand accommodations for essential wartime travelers," provides that the Pullman Company may not refund fares for unused accommodations when reservations are not cancelled in time for resale. The importance of this tariff, Mr. Burke pointed out, was emphasized in a recent report of the Commission on a case in which it upheld the refund procedure and declared that it is vital in wartime, to promote maximum use of available Pullman equipment.

"In this case, a Chicago businessman and his attorney had sleeping car reservations out of Washington which they failed to use or cancel," Mr. Burke explained. "When they were unable to get refunds when they applied for them some time later, they appealed to the I. C. C., protesting the tariff. Evidence in the case revealed a significant fact.

"Although every unit of space on the Liberty Limited—the train the businessman had planned to take—had been sold, including the accommodations on three extra cars which had been added, and although there was a long waiting list for space on the train, it left Washington with 57 units of space unoccupied, because 57 persons failed to make the trip at the last minute and either did not cancel their reservations or do so early enough to permit resale of the space."

Materials and Prices

The following is a digest of orders and notices that have been issued by the War Production Board and the Office of Price Administration since April 3, and which are of interest to railways:

Brass Nipples and Ferrules—The use of yellow brass scrap, one of the copper base alloys, is permitted in casting solder nipples and ferrules (Amendment to Copper Conservation Order M-9-c) to replenish rapidly dwindling stocks of these items, which are essential in plumbing installations and in making repairs.

Electrical Connectors — Electrical connectors (specifically "AN" type, similar to "AN" type, and coaxial cables) have been excluded from WPB scheduling procedure. These items, which were formerly undesignated products under the terms of General Scheduling Order M-293, have been removed from control of the order because of favorable supply conditions.

Electric Switches and Panel Boards—An amendment to L-315 is designed to improve the quality and performance of safety switches, panel boards and service entrance equipment, by lifting all restrictions on the gauge of steel which may be used in producing enclosing cases, fronts and doors for this type of equipment. Also, doors now may be used on panel boards.

Fluorescent Lighting Fixtures—An amended version of L-78 removes restrictions on the use of metal in reflectors of fluorescent lighting fixtures, and also weight limitations on ferrous metal used in other parts of these fixtures. This action is in line with the WPB policy of re-substituing materials normally used when such change is warranted by the material supply situation, and will result in a better product and a saving of manpower.

Hardboard, which is now scarce, has been used for reflectors since metal was prohibited in October, 1942. The return to metal reflectors will save an estimated 10,000,000 square feet of hardboard per year. Permitted use of aluminum in industrial type lighting equipment (including industrial type fluorescent) was established by Order M-1-i (Aluminum) as amended March 24.

L-78 as amended is effective immediately. However, WPB pointed out, manufacturers will require from 60 to 90 days to make deliveries of the new types of fixtures in any substantial quantities, because of the current sheet steel delivery situation and the time required to get the steel into production.

Lumber—The definition of consumers of lumber subject to the provisions of L-335 has been clarified by amending the order, the WPB announced April 7. Order L-335 designates as Class I consumers persons who used more than 50,000 board feet of lumber in the last quarter of 1943 or expect to use more than this amount in either the second or third quarter of 1944. With certain specified exemptions, Class I consumers must report their lumber requirements and other data on WPB Form 3640 on or before April 25.

L-335 was amended April 6, to make clear that branches, plants and other divisions of a single company should not be grouped together in determining the amount of lumber used or to be used, if they regularly maintain separate lumber inventories. For example, if a company has two plants maintaining separate lumber inventories, and each of them used less than 50,000 board feet of lumber in the last quarter, 1943, and expects to use less than this amount in the second or third quarters, 1944, then neither the plants nor the company are Class I consumers. If, however, one of the plants used or expects to use more than this amount, that plant is considered a Class I consumer. Companies and their plants and branches must not split up regularly maintained inventory for the purpose of evading the order. Past and current inventory practices determine whether or not a company, its plants and branches, is a consumer subject to the provisions of L-335.

Southern Pine and Hardwoods—Direction 2 to M-361 (Southern Yellow Pine) and Direction 2 to M-364 (Hardwoods), were revoked April 3, since their provisions are now incorporated into the orders as amended March 20. The applicable sections provide that purchase orders for Southern yellow pine lumber and specified kinds of hardwood may be placed through wholesalers without designating the individual producers from whom the lumber is to be obtained. Directions 1 and 5 to M-361 and Directions 1, 3 and 5 to M-364 were amended to conform with relettering of the paragraphs of the orders as amended on March 20. No substantive changes in the provisions of the orders and directions are made by these amendments.

Southern Yellow Pine and Hardwood—Manufacturers who obtain southern yellow pine and hardwood lumber by certification under Directions 4 to Orders M-361 and M-364 need not file quarterly statements (WPB Form 3537) if they are in the group of lumber consumers required to file reports under the new lumber order, L-335, the WPB announced April 6. Directions 4 to the orders provide that manufacturers and repairers of locomotives, rolling stock and busses, may obtain their restricted lumber by certification instead of applying for specific WPB purchase authorization.

Release from the obligation to file WPB Form 3537 if WPB Form 3640 is filed under Order L-335 is effected by amendments to the Directions, issued April 6. Other minor changes are also made in the Directions to conform with re-lettering of paragraphs in the orders as amended on March 20.

Special Sales—The first monthly revision (April 3) of PR-13, which governs "special sales" of materials and products, includes numerous changes in both A and B lists and should be consulted by persons making special sales in order to determine what rules govern the sale of the particular product involved.

"Steel" Defined—Interpretation-23 to CMPR-1, clarifies the definition of "steel" in CMPR-1 so that it conforms with the definition used in the M-21 series of WPB orders. **"Steel"** as used in CMPR-1 means all carbon steel (including wrought iron) and alloy steel in the forms and shapes that are designated as controlled materials (these designations are contained in Schedule I of CMPR-1). The term includes all types of rejected or second quality material and shearings, except when sold as scrap for remelting or when sold to a dealer for sorting or processing or for resale as scrap for remelting. The term includes material (in the forms and shapes indicated in Schedule I) salvaged from scrap and sold for other than remelting purposes, except that it does not include material that has been in use or service.

Prices

Millwork—MPR-525 (Jobber Sales of Stock Millwork) effective April 12, provides new ceiling prices for jobber sales of stock millwork, varying from 1.2 per cent to 5.8 per cent above current jobber ceilings. Established according to geographical location, the new prices cover nine areas comprising all of the country east of and including the eastern half of Montana, the states of South Dakota and Iowa, the eastern half of Missouri, the state of Arkansas and most of Texas. Similar price adjustments for the remaining areas will be announced upon completion of studies now being made by OPA.

Amendment No. 4 to RPS-44 (Douglas Fir Doors) deletes jobbers' sales of Douglas fir doors from this price schedule.

Amendment No. 5 to RMPR-293 (Stock Millwork) provides that, for buyers who received manufacturers' maximum service discounts or concessions in the last six months of 1943, the maximum carload price for stock millwork shall be the maximum carload direct-mill price to retail dealers, less the manufacturer's published service discounts or concessions in effect in the first nine months of 1941. The maximum published concession, OPA said, is the service discount received by jobbers. The purpose of this amendment is to preserve the service discounts which manufacturers customarily have given millwork jobbers.

Resale of Iron and Steel Products—Amendment No. 21 to RPS-49 (Resale of Iron and Steel Products) effective April 8, allows resellers of iron and steel products such as warehousemen and jobbers, to use the lowest filed or published rail tariff rate of freight plus three per cent of such rate in computing delivered prices.

The action, OPA said, removes any question of possible liability under the revenue laws for misrepresentation of the payment of the Federal Transportation Tax by a reseller in a delivered sale where the freight factor may not be the same as freight actually paid. This action authorizes the addition of three per cent of the rate of rail freight in computing delivered prices, no matter whether the tax actually has been paid or not.

GENERAL NEWS

Help Lack Worries Mid-West Shippers

Urge deferment of essential railroad labor—Rap the St. Lawrence pitch

Nearly 1,000 trains were delayed two hours or more on 64 railroads in February and nearly 2,000 switching tricks were not worked because of the shortage of men, L. M. Betts, manager of the Railroad Relations section of the Car Service division of the Association of American Railroads told members of the Mid-West Shippers Advisory Board at their sixty-sixth regular meeting at Chicago on April 7. Because switching locomotives stand idle and cars are not moved, he said, serious delays of necessary material are occurring on the railroads and to prevent reaching the danger point, the A. A. R. has brought the matter to the attention of the government in an effort to secure the deferment of essential railroad employees. The manpower shortage is serious, he said, present needs totaling 100,000 men with the prospect for a further loss of 50,000 men in the next few months.

In a resolution passed by the members, the Board's position in opposition to the St. Lawrence seaway and hydro-electric power project was reaffirmed. The members also instructed the general chairman of the Board to communicate with the proper government officers in an effort to procure the deferment of essential railroad men from military service.

Although box car conditions in the country have improved because grain loading has eased up, the box car problem will again be acute this year, Mr. Betts forecast. There are prospects for a much heavier crop of winter wheat in the Southwest than occurred last year and the demand for that wheat will result in a prompt movement to markets and elevators at the terminal storage points, he said. Canadian feed grain is being moved into the United States, he asserted, and it has been proposed that 3,500 United States box cars be used to shuttle between the head-of-the-lakes ports, Port William, and Duluth and the Canadian provinces to move the grain to points where it can be transported by water later in the season.

The coal car situation will also be tight, according to C. R. Megee, manager of the Open Top Car section, the forecast of the nation's loadings for 1944 being about 700,000 cars more than last year. The solid fuels industry, he said, has a program for the production of about 15 million more tons of coal than were produced in 1943, which was the peak year for the production of coal in the United States. In addition, the War Production Board has set a goal for the movement of 90 million tons of iron ore down the Great Lakes.

John J. Hayden, district manager at Chicago, reported favorable operating conditions on the railroads in the territory of the Board. Flat cars, he said, continue in demand and on many roads create a serious problem.

"Perfect shipping" was discussed by A. L. Green, special representative of the Freight Claim division of the A. A. R., and E. F. Stecher, traffic manager of the Stewart Warner Corp. Imperfect shipping, Mr. Green said, cost the railroads of this country and Canada $42,050,364 in 1943 in claims paid for loss, delay and damage, or 26 per cent more than was paid in 1942.

A testimonial luncheon was given in honor of William D. Beck, who retired on March 1 as district manager of the Car Service division at Chicago. Irving M. Peters, general chairman of the Board, presided and M. J. Gormley, executive assistant of the A. A. R., was toastmaster. A chair and lamp were presented to Mr. Beck by the members of the Board.

I. C. C. Decides Four Intrastate Fare Cases

The Interstate Commerce Commission has issued a report requiring that intrastate fares in Alabama, Kentucky, North Carolina, and Tennessee be brought into line with the present adjustment of interstate rates. The report in No. 28963 and related proceedings finds that the intrastate fares, where now lower than corresponding interstate fares, cause unjust discrimination against interstate commerce.

In accordance with the usual practice in such cases, the commission left to the railroads and the respective state commissions the matter of complying with its findings. If compliance is not accomplished within 30 days from the service of the report, "consideration will be given to the entry of an appropriate order."

Commissioner Splawn filed a dissenting expression to which Commissioners Aitchison and Mahaffie subscribed. In his judgment, "the decision of the majority on the evidence in these proceedings goes beyond our lawful power under section 13(4)."

Automatic Car Washer

The Pennsylvania Railroad has installed a $100,000 automatic car washer in its Philadelphia 30th street coach yards. After washing, cars are passed to other tracks where cleaners go to work on the interiors.

The present program of car washing calls for the daily cleaning of more than 200 cars that terminate in Broad Street Station.

Atlantic Shippers Size Situation Up

Forecast a slight decline in 2nd quarter loadings—War traffic heavy

Were it not for the serious manpower situation on the railroads, "prospects for protecting rail transportation requirements this year would seem good," L. M. Betts, a manager of the Car Service Division, Association of American Railroads, told the Atlantic States Shippers Advisory Board at their 64th regular meeting, in Syracuse, N. Y., April 13. An address to the shippers by William White, president of the Lackawanna, is reported elsewhere in these pages.

In the first quarter of this year, Mr. Betts pointed out, more than 2,800 trains on larger railroads alone were delayed two hours or longer because of crew shortage, and, in this same period, and also for lack of men, more than 6,000 cases were reported where switch engines could not work their full number of daily "tricks." The speaker had outlined a similar picture for Mid-West shippers on April 7 (reported elsewhere in these columns), emphasizing the resultant slower movement of traffic and reduction in car days available for service.

More Equipment—Mr. Betts mentioned several factors which would indicate a hopeful forecast. The railroads are in good operating condition following a fairly mild winter; they have 32,800 new cars and 885 new locomotives, installed during the past 12 months, and for the remainder of the year, the car and locomotive building program provides almost twice the production of the same period in 1943. However, he cautioned, this "favorable showing" is offset severely by manpower shortage, both on railroads and in industry, including car building plants. Also, he noted, there is "some uncertainty as to the fourth quarter allocations previously made of materials for railroad use, both for car building and other service."

Mr. Betts praised shippers and receivers of freight for their "patriotic and unselfish contribution" in promptly releasing cars.

Makes Last War Look Tiny—Warren C. Kendall, chairman, Car Service division, A. A. R., in discussing the national transportation situation, revealed that in the 28-month period from December, 1941, through March, 1944, railroads carried more than 21,000,000 troops, or more than four times as many as during the 19 months when America was engaged in World War

(Continued on page 750)

White Urges Rate Cut Be Abandoned

D. L. chief finds steam power too high-priced—Stresses need for better credit

President William White, of the Lackawanna, addressing the Atlantic States Shippers Advisory Board meeting in Syracuse, N. Y., on April 13, expressed the hope that the Interstate Commerce Commission would restore the Ex Parte 148 freight rate increases which it suspended last year; and voiced some misgivings at the price of steam freight locomotives. "I know of one railroad that has recently purchased modern freight engines at a cost of $210,000 each," he said, "whereas the identical type of locomotive nine years earlier cost $110,000."

Fears for Survival of Steam—"While there is no doubt that the spur of competition will result in improvements of steam locomotives," he went on to say, "it is a question whether with the high price of coal and the high cost of maintenance the improvements in steam locomotives design will be such that sufficiently greater utilization can be secured as to warrant their continuance. I do not know that the Diesel locomotive has yet proved itself, but certainly they are growing in number, and experience with them will dictate improvements in their design. Diesels cost almost twice as much per unit of horsepower as steam locomotives, so the job of Diesel manufacturers is to get the price per horsepower down.

"Railroads which have a sufficient density of traffic to justify the cost of overhead transmission may change to the use of electric locomotives. I venture to predict that we will see, in a few years, radical changes in motive power; and it may have an economic repercussion because the largest tonnage of any single commodity transported in this country is bituminous coal, and the railroads use about 25 per cent of all bituminous coal production for fuel purposes."

The speaker did not consider that airlines would be serious contenders for freight traffic, but he expected bus and truck rivalry to be severe—as also airline competition for passengers. He looked for the railroads to hold on to a substantial volume of passenger business "if people are given the kind of service they require"; and to this end he welcomed questionnaires being used by two railroads recently "to find out from the public what they want in the way of a coach."

Wage Cut Is Alternative—"There has been," he went on to say, "a lot of loose talk about the railroads earning excessive profits, but even in the best years they have not earned an excessive return on their investment. They have not increased their dividends, but have devoted such earnings as they have had to debt reduction. The railroads are being worn out.

"I am hopeful that the Interstate Commerce Commission will lift the suspension of freight rate increases and permit them to go back where they were during part of 1942 and 1943, and allow the railroads to accumulate a fund of liquid assets that will permit proper maintenance and improvement of the properties and the investment in new equipment that will be necessary to provide proper service and enable the railroads to hold their own in competition with other forms of transportation.

"We must look either to a decrease in wages or the restoration of Ex Parte 148 increases if the railroads are to be kept in a financially healthy condition."

Less Double Track?—Forseeing that "the railroads may have too much capacity to handle normal peacetime business," Mr. White said, "it is conceivable that where railroads now have double track they will take up one, and with the installation of centralized traffic control and modern signaling, operate on a single track that will have from 65 to 80 per cent of the capacity of a double track. We can also visualize trains being hauled by locomotives that can be kept in use constantly so that the number of units required will be materially reduced, and with internal combustion engines which can be lifted out and replacements put is so as not to tie up the entire machine.

"If we can depend upon railroad management to meet the problems of competition with economical and efficient management and a service that will keep business on the rails, there remain two other fundamental necessities—one is the opportunity to compete on equal terms with other forms of transportation and the remaining problem is railroad credit.

Credit Must Be Restored—"The changes that will be necessary to meet competition and to operate economically and efficiently will require the expenditure of vast sums of money to re-equip the railroads with motive power and passenger cars. No feat of legerdemain will provide the money. It must come out of earnings, and the credit of railroads must be vigorously protected.

"They cannot go on paying ever-higher wages and keep their credit good. Capital must have a fair share, and by this I do not mean an exorbitant share.

"Labor has a vital stake in the problem of meeting competition, and it must take stock of itself and determine what is best for its own interest, and whether three-quarters of a million high-paying jobs are better than one million good-paying jobs. Capital must have a fair reward; and capital, if it is going to be employed in the railroad industry, will demand good credit."

The speaker paid high tribute to the contribution the Shippers Boards had made in helping the carriers achieve their remarkable record in the movement of war traffic.

Fined in Undercharge Case

The Interstate Commerce Commission has been advised that the Texas & Pacific on April 6 pleaded guilty to each of the five counts of an indictment charging it with having permitted the shipment of certain second-hand boiler tubes at less than the established rates. The federal court at New Orleans, La., thereupon fined the road a total of $2,000.

Sees Revenues Now on Horizontal Plane

I. C. C. bureau finds upward revenues arrested at high level

The upward trend in railroad freight revenues, "which featured 1941, 1942, and the first part of 1943, appears to have become horizontal at a high level," according to the analysis of recent index figures made by the Interstate Commerce Commission's Bureau of Transport Economics and Statistics in the latest issue of its "Monthly Comment on Transportation Statistics."

The index figures are based on the 1935-1939 monthly averages as 100 with adjustment for seasonal variation. The freight revenue index for February was 218.3, compared with January's 227.8, December's 220.5, and November's 211.4. The Bureau's conclusion that the trend has become horizontal is based upon its finding that the February index "is about at the average level of the preceding six months (219.3)."

Travel Rise Easing Too—The passenger revenue index for February (406.2) "is much lower than the average of the preceding six months (430.1) but the total passenger revenue was 26.7 per cent higher than for February last year, which becomes 22.4 per cent when adjustment is made for the extra leap-year day." For the 12 months ended with February, total operating revenues amounted to $9,195,899,517.

While February's gross was up only 10.8 per cent above that of February, 1943, the operating expenses rose 20.5 per cent; and the operating ratio was up from 61.6 per cent to 66.9 per cent. The Bureau calls attention to how the five-year amortization of defense projects "continues to be a heavy charge." In February, it amounted to $13,107,902 for equipment, which is "to be compared with $17,495,824 for all other depreciation of equipment." Total February charges for five-year amortization of road items amounted to $1,333,389.

Large Cash Accumulation—Analyzing the 28 per cent decline in net income, January, 1944, compared with January, 1943, the Bureau finds the drop to have been the "net result principally" of the increased amortization charges; "a small decline in the profitability of operations before considering income taxes and amortization"; increased income taxes; and "a small decline in fixed charges." It was considered "of interest to note" that as of the end of January, the Class I roads "had over one billion dollars in cash (including temporary cash investments) in excess of their accrued tax liability."

Mention is made of an article in the March, 1944, review of the National City Bank, which gives the net income of groups of leading manufacturing corporations in comparison with their net worth. The "net income" was taken as the income after depreciation, interest, taxes, and other charges and reserves, but before dividends; the "net worth" includes book value of outstanding preferred and common stock and surplus account at the beginning of the year.

Income Ratio to "Net Worth"—On

News Department continued on second left-hand page

NORFOLK AND WESTERN RAILWAY COMPANY

Summary of Forty-Eighth Annual Report for 1943

The volume of traffic handled in 1943 by Norfolk and Western Railway Company exceeded the previous record established in 1942 as a result of continued increase in general business activity and heavier demands of the Government in the movement of personnel and war equipment.

Railway Operating Revenues increased $10,565,000, or 7.57 per cent., over 1942. Railway Operating Expenses increased $8,223,000 or 10.79 per cent. Net Income increased $1,079,000, or 4.53 per cent. Income Balance of $21,305,000 was equal to $15.15 per share of Common Stock held by the public.

Condensed Income Statement

	1943		Comparison with 1942	Per Cent.
Railway Operating Revenues	$150,164,921.25	Inc.	$10,564,757.62	7.57
Railway Operating Expenses	84,395,641.14	Inc.	8,222,622.82	10.79
Net Revenue from Railway Operations	$65,769,280.11	Inc.	$2,342,134.80	3.69
Railway Tax Accruals:				
Federal	$43,693,420.04			
State, County and Local	5,504,798.42	49,198,218.46	Inc. 3,101,724.50	6.73
Railway Operating Income	$16,571,061.65	Dec.	$759,589.70	4.38
Rent Income — Equipment and Joint Facilities—Net	8,337,813.30	Inc.	1,838,700.53	28.29
Net Railway Operating Income	$24,908,874.95	Inc.	$1,079,110.83	4.53
Non-Operating Income	1,411,922.70	Inc.	579,685.70	69.65
Gross Income	$26,320,797.65	Inc.	$1,658,796.53	6.73
Deductions from Gross Income:				
Interest on Funded Debt	$2,113,772.11	Dec.	$2,490.39	.12
Other Deductions	2,009,775.99	Inc.	1,373,801.95	215.52
	$4,123,548.10	Inc.	$1,370,311.56	49.77
Net Income	$22,197,249.55	Inc.	$288,484.97	1.32
Dividends on Adjustment Preferred Stock—$4.00 per share	892,353.00	Dec.	8,976.00	1.00
Income Balance	$21,304,896.55	Inc.	$297,460.97	1.42

NOTE: NET RAILWAY OPERATING INCOME was equivalent to 4.48 per cent. earned upon the Company's Railway Property Investment, compared with 4.30 per cent. in 1942.

Condensed Earned Surplus Statement

(Formerly Condensed Profit and Loss Statement)

Credit Balance, January 1, 1943		$180,049,988.25
Credits:		
Income Balance for Year	$21,304,896.55	
Miscellaneous Net Credits	380,699.64	
Total Credits		21,685,596.19
		$201,735,584.44
Charges:		
Appropriation of Surplus for Dividends on Common Stock—$10.00 per share	$14,064,830.00	
Miscellaneous Net Charges	424,265.74	
Total Charges		14,489,095.74
Credit Balance, December 31, 1943		$187,246,488.70

Dividends

Dividends of $1.00 per share quarterly, a total of $4.00 per share, or $892,353, were paid upon the Adjustment Preferred Stock in the hands of the public. Dividends of $2.50 per share quarterly, a total of $10.00 per share, or $14,064,830, were paid upon the Common Stock in the hands of the public.

Taxes

Railway tax accruals were $49,198,000, an increase of $3,102,000, or 6.73 per cent. Taxes amounted to 33 cents per dollar of Operating Revenues, to $2,211 for each employee, to $35 for each share of Common Stock, to 222 per cent. of Net Income after taxes, and to 9 per cent. of Railway Property Investment. Federal taxes, $43,693,000, representing 88.81 per cent. of all tax accruals for the year, increased $3,372,000, or 8.36 per cent. Included in this amount were accruals for Normal tax and Surtax, $13,329,000, Excess Profits tax, $26,400,000, at the 90 per cent. rate, Railroad Retirement and Unemployment Insurance taxes, $3,004,000, and Capital Stock tax, $875,000.

Post-War Credit—Federal Excess Profits Tax

A post-war credit of 10 per cent. of the amount of Excess Profits tax for each year such tax is paid was provided for by the Revenue Act of 1942. The credits due the Company were estimated to be $2,170,000 for 1942 and $2,640,000 for 1943, a total of $4,810,000.

These credits are not immediately available to the Company for dividends or for other purposes. United States Government bonds will be received in the amount of the credits, and will bear no interest and cannot be negotiated, assigned or pledged until cessation of hostilities.

Reserve Fund for Taxes and Contingencies

A reserve fund, established to pay accrued taxes and to provide for contingencies, aggregated $64,309,000 at the end of 1943. This fund is invested in United States Government obligations.

Under present Federal taxing statutes there is no opportunity for railroads to set aside reserves out of current earnings, free of tax, to meet deferred maintenance and other post-war demands. Heavier traffic during the war years has resulted in greater wear and tear upon the roadway and equipment and in accelerated obsolescence of railroad facilities generally. Under these circumstances substantially larger amounts should be expended for upkeep and replacements, but, because of shortage of critical materials and manpower, maintenance and renewal programs have not kept pace with requirements.

The Interstate Commerce Commission, recognizing the dangers inherent in this situation, authorized the railroads to appropriate funds to be held as a reserve to take care of deferred maintenance expenses. However, the Commissioner of Internal Revenue has declared that these funds are unexpended profits, and as such are subject to taxation. This means that for each dollar set aside during the year for deferred maintenance and other post-war demands, many of the railroads must pay the equivalent of eighty-one cents or more to the Federal Government because of the Excess Profits tax.

Financial

The Capital Stock of the Company held by the public was $162,849,900, and represented 76.03 per cent. of outstanding stock and bond capitalization. On December 31, 1943, the Company's stockholders numbered 14,010.

The total Funded Debt held by the public was $51,335,332, and represented 23.97 per cent. of outstanding capitalization. Fixed charges were earned 11.74 times in 1943 and an average of 12.13 times over the last ten years.

Securities in the voluntary sinking fund for retirement of Funded Debt had a par value of $1,702,900 and a market value of $2,086,796.

Employees

Employees during the year averaged 22,249. There were 3,134 furloughed employees in the armed forces on December 31, 1943. Railway Property Investment of $556,323,000 averaged $25,004 per employee. The Company's total payroll for 1943 was $53,110,000, an average of $2,387 per employee. In addition to wages and salaries, the Company paid $3,476,000 for Railroad Retirement and Unemployment Insurance taxes and employee Relief and Pension Funds, which averaged $156 per employee.

Wage Demands

Wage demands which had been presented to the railroads by employees, were the subject of extensive negotiation between the representatives of the employees and the railroads. Agreement was not reached, and the procedure prescribed by the Railway Labor Act was invoked. Final settlement was accomplished through action of Emergency Boards and the intervention of the President of the United States. The resulting wage awards increased the Company's payroll for 1943 by approximately $3,550,000, and will increase the payroll for 1944 by about $6,250,000 at the present level of employment.

W. J. JENKS, *President*

PULLMAN INCORPORATED

SUMMARY OF ANNUAL REPORT FOR 1943

The provision of more service for passengers in Pullman cars in one year than in the three pre-war years, 1938-40, combined, and the production of armaments and essential railway equipment greater by 200% than the Company's total manufacturing output of any peacetime year have been made possible by the cooperation of Pullman Stockholders, employees and management. To the men and women who are the Pullman organization, the attainment of these records has meant unremitting attention to duty, exercise of tact and understanding in dealing with a public harassed by wartime transportation conditions, and the tapping of new veins of creative and engineering ability.

Nowhere in the long history of participation by The Pullman Company in America's economic development is there to be found a 12-month period which can approach the year 1943 in volume of transportation service rendered.

A total of roundly 26,000,000,000 miles of military and civilian passenger travel was provided in the fleet of cars making up the Pullman pool. These cars accounted for approximately 30% of the total passenger miles of traffic on American Railroads during the year, although the pool, with 7,121 Pullman-owned cars on December 31, 1943, represented only about 25% in number and 11% in normal passenger-carrying capacity, of all railway passenger-carrying equipment.

Of the total passenger-miles performed by Pullman in 1943, approximately 12,000,000,000 were performed in carrying organized bodies of troops. Currently the Pullman fleet, including the troop sleepers leased from the Defense Plant Corporation, is furnishing approximately 85% of the cars requested by the military service for long-distance troop movements.

CONSOLIDATED INCOME ACCOUNT

FOR YEARS ENDED DECEMBER 31, 1943 AND 1942

	1943	1942(Note1)
	(Cents Omitted)	
SLEEPING AND PARLOR CAR BUSINESS:		
Gross operating revenues	$151,847,939	$113,292,473
Less:		
Operating expenses (Note 2)	$ 84,029,243	$ 69,327,548
Provision for retroactive wage adjustment	5,962,595	—
Provision for depreciation	10,977,471	10,872,306
	$100,969,310	$ 80,199,855
Net Operating Revenue	$ 50,878,628	$ 33,092,617
Less:		
Provision for contract revenue payments to Railroads	26,887,573	13,569,687
Provision for Federal taxes on income (Note 3)	19,670,587	10,535,656
	$ 46,558,161	$ 24,105,344
	$ 4,320,467	$ 8,987,273
Appropriation to Reserve for Post-war Re-adaptation of Pullman Equipment	—	2,500,000
Net Carrier Earning	$ 4,320,467	$ 6,487,273
MANUFACTURING BUSINESS:		
Sales and miscellaneous revenues	$273,642,293	$189,716,395
Less:		
Cost of goods sold and operating expenses	$241,322,573	$165,620,912
Provision for depreciation	1,995,953	2,090,231
Selling and administrative expenses	2,577,725	2,310,643
Interest, fees and expenses on VT Loan	118,071	—
Loss on Seaboard receivership settlement	—	409,796
Loss on manufacturing plants sold or scrapped	—	342,181
Loss on foreign manufacturing subsidiary	—	536,003
Provision for Federal taxes on income (Note 3)	22,483,396	13,447,310
	$268,497,720	$184,757,080
	$ 5,144,572	$ 4,959,315
Appropriation to Reserve for Manufacturing Contingencies	500,000	2,000,000
Net Manufacturing Earning	$ 4,644,572	$ 2,959,315
INVESTMENT OPERATIONS:		
Income from securities and miscellaneous items	$ 939,970	$ 662,965
Profit on securities sold	3,141	4,161
	$ 943,111	$ 667,126
Less: Miscellaneous income deductions	$ 36,676	$ 88,572
Administrative expenses of Pullman Inc.	335,686	346,383
Provision for Federal taxes on income (Note 3)	295,552	199,248
	$ 667,915	$ 634,204
Net Investment Earning	$ 275,196	$ 32,922
	$ 9,240,235	$ 9,479,510
FEDERAL POST-WAR TAX REFUND:		
Claim for Post-war 10% Refund on 1943 and 1942 Excess Profits Tax	$ 3,451,696	$ 1,387,758
Less: Appropriation to Reserve for Post-war Re-adaptation of Manufacturing Plants and Pullman Equipment	3,451,696	1,387,758
CONSOLIDATED NET INCOME, CARRIED TO SURPLUS	$ 9,240,235	$ 9,479,510

NOTES: 1. In the Consolidated Income Account for the year 1942 submitted for comparison, the manufacturing earnings, taxes, claims for excess profits tax refund, and appropriation of the latter to post-war reserves, have been adjusted to reflect the renegotiation in July 1943 of prices on 1942 armament shipments whereby the reported net income for 1942 of $10,361,210 was reduced $881,700. Also, the Consolidated Surplus Account and the Consolidated Balance Sheet for the year 1942 have been adjusted correspondingly.
No provision has been made in the 1943 accounts for renegotiation of selling prices on 1943 armament shipments. Renegotiation proceedings have not yet begun for 1943.
2. In accordance with I. C. C. accounting instruction, the amount of the reserve for deferred maintenance $2,932,207 has been included in operating expenses, for the year 1943, and $2,743,910 for the year 1942.
3. Total provision for Federal Taxes on Income on all corporations whose earnings are consolidated in this account was $42,449,538 (including provision of $34,516,966 for excess profits tax) in 1943, and $24,182,214 (including provision of $13,877,586 for excess profits tax) in 1942. These amounts have been allocated among the three divisions of the Consolidated Income Account.

Rail-Pullman Travel Trends

One of the most serious challenges the Railroad industry will ave to face after the war will be in the field of passenger transortation. We believe that these challenges can be successfully met ecause, in the post-war era, tremendous strides will be made in e development of the equipment and services for rail travel and l the tools of modern merchandising will be marshalled as never efore. These developments as applied to Rail-Pullman aims may e summarized as follows:

1. To continue, at a greatly accelerated pace, the pre-war program of modernization of rolling stock, track and terminal facilities so that railway travel will be faster, more comfortable and luxurious, and take on added attractiveness. To improve the product.
2. To offer rate attractions. In other words, seek to develop new market levels.
3. To reinvigorate old customer services and introduce new ones. In other words, seek increased public good will.

Sleeping Car and Sleeping Car Service of Tomorrow

For its part The Pullman Company intends to be ready with lans for improved cars and service to participate in the post-war ravel market, unless as a result of conditions growing out of the ending anti-trust case it should become impossible for Pullman o continue in an effective way its ownership and management of hat part of its business.

As in the past, the major competitive factors in the first-class ravel business will be safety, speed, cost, comfort, pleasure, servce and convenience. In the matter of speed, the margin is with he airlines, but as for the other factors, Rail-Pullman service hould continue to hold and even enlarge its advantages.

In its planning, the Company seeks, with the Duplex-Roomette nd the Coach-Sleeper, to gain a competitive margin especially in egard to the cost, as well as the comfort and convenience factors. Primarily, of course, the Coach-Sleeper is designed to provide leeping car facilities at greatly reduced cost, thereby substanially broadening the Pullman market. The Duplex-Roomette car s designed to give the present Pullman traveler a superior type f accommodation, which will appeal to the desire for greater omfort, convenience and privacy, at little if any more than the resent charge for a lower berth.

New Horizons in Car Design

Much of Pullman-Standard's peacetime research has found application in its wartime production, and likewise, much of its reearch to further improve the quality and quantity of its war prodcts will prove useful in post-war manufacturing activities.

One line of peacetime research resulted in the development of a unique and efficient method of sectional fabrication which has ow been applied to the building of vessels for the Navy. Simlarly a study in welding technique for modern lightweight cars nabled Pullman-Standard successfully to produce in volume the ll-welded M-4 tank, and vessels for the Navy.

In time, we look for the improved techniques and new developments of the war period to influence many phases of railroad quipment and operation. In the equipment field we may see such levelopments as:

Increased installation of streamlined, air-conditioned lightweight passenger trains, built of new and stronger alloys of steel and of the "light metals."

Freight cars of lighter weight, carrying greater revenue loads and designed for rapid loading and unloading.

Smoother riding of high-speed trains by greater use of shock absorbing installations in the running gear; better spring suspension and other truck details, with greater use of roller bearings to permit higher speed operation without danger from hot journals.

Improved types of sleeping car accommodations; better air conditioning; improved lighting, better seating arrangements; and more decorative features in all classes of passenger-carrying cars.

Radio communication for train crews and radio telephone service for passengers, television receivers in club and lounge cars; radio receivers, inaudible to other passengers, in individual accommodations.

One of the important possibilities which Pullman-Standard oresees is the mass production of freight and passenger cars of tandard designs. However, standardization should not interfere with progress and standard specifications should be modified to eep pace with improvements.

Employees Do Their Part

On battlefront and on homefront our employees have done and re doing their part. To date, 9,300 of our men and women have ntered the Services.

More than 54,000 men and women are at the present time emloyed in Pullman war production and carrier operations. This narks an all-time high employment record and an increase of 6,000 since 1940.

The average annual wage of all Pullman employees in 1943 as $2,275, an increase of 16% over 1942 and 49% over 1940. otal payrolls in 1943 amounted to $123,400,000 compared with 84,200,000 in 1942 and $42,300,000 in 1940. Individual earnings ose because of longer hours of work with attendant overtime pay nd higher wages and salary rates.

The gross 1943 income of $426,400,000 was the highest on record but taxes required a record total of $50,844,157 of the pre-tax net income. Although the gross increased 40 per cent over 1942, total net earnings of $9,240,235 represented a small decline from $2.87 a share reported in 1942 to $2.85 in 1943. Taxes of all kinds absorbed 84.6% of the net income before taxes and were equivalent to $15.68 per share of stock, or more than five times the earnings available for payment of dividends to stockholders. The sleeping and parlor car business accounted for $4,320,467 of the net earnings and $151,800,000 of gross revenues. The manufacturing activities accounted for $4,644,572 of the net earnings and $273,600,000 of the gross. 1943 figures are before renegotiation, while 1942 figures are after renegotiation.

THE PULLMAN COMPANY

Traffic and Operating Statistics

Comparative Statement for Years Ended December 31

ITEM	1939	1940	1941	1942	1943
CARS OWNED	7,052	6,901	7,048	7,121	†7,766
CARS OPERATED	5,100	4,990	5,303	6,368	7,096
CAR MILES	825,745,133	820,386,700	878,057,274	1,071,254,181	1,222,676,452
REVENUE PASSENGERS:					
Berth	11,549,947	11,077,546	13,166,554	21,008,309	26,561,931
Seat	4,105,188	3,687,770	3,744,167	5,054,240	6,069,968
Total	15,655,135	14,765,316	16,910,721	26,062,549	32,631,899
REVENUE PASSENGER MILES	8,485,399,123	8,213,878,992	10,070,406,876	19,071,589,061	25,891,465,679
OPERATING REVENUE*	$ 60,664,266	$ 60,143,649	$ 67,040,587	$ 99,722,785	$ 124,960,365
Average per Car Operated	$ 11,894.95	$ 12,052.84	$ 12,642.01	$ 15,659.99	$ 17,609.97
EXPENSES**	$ 58,573,975	$ 57,899,790	$ 65,307,638	$ 93,235,511***	$ 120,639,898
Average per Car Operated	$ 11,485.09	$ 11,603.16	$ 12,315.23	$ 14,641.25	$ 17,001.11
NET CARRIER EARNING‡	$ 2,090,291	$ 2,243,859	$ 1,732,949	$ 6,487,273***	$ 4,320,467
TRAFFIC AVERAGES:					
Average Operating Revenue per Passenger	$ 3.88	$ 4.07	$ 3.96	$ 3.83	$ 3.83
Average Net Carrier Earning per Passenger	$ 0.13	$ 0.15	$ 0.10	$ 0.25	$ 0.13
Average Net Carrier Earning per Car per Day	$ 1.12	$ 1.23	$ 0.90	$ 2.79	$ 1.67
Average Mileage per Car Operated	161,914	164,396	165,577	168,225	172,305
Average Journey per Passenger (Miles)	542	556	596	732	793
Average Miles per Car per Day	444	449	454	461	472
Average Loading per Car (Passengers)	10.28	10.01	11.47	17.80	21.18

* From all sources after deducting contract revenue payments to Railroads.

** Including allocated portion of Federal taxes on income.

*** After appropriation of $2,500,000 to reserve for post-war re-adaptation of Pullman equipment.

‡ After provision for Federal taxes on income.

† Including 645 special Government-owned troop and kitchen cars installed late in 1943 and operated for Army Transportation Corps.

this basis, it is calculated that for Class I line-haul roads the ratio of net income for 1943 to the net worth of $11,165,000,000 at the beginning of the year was 7.83 per cent, and for 1942 it was 8.41 per cent. However, the Bureau adds: "The validity of this comparison of railway and industrial corporations may be questioned not only because of variations in the degree of conservatism in the net worth computed from the balance sheets but also because the proportion of the total investment represented by bonds, which normally bear a relatively low rate of interest, is much larger for railroads than for industrial corporations generally, and also because a large part of the property operated by Class I railways is leased from lessor companies, the net income of which for 1942 was only 4.6 per cent of their net worth at the beginning of the year."

The Bureau then goes on to compute 1943 rates of return for the railroads in "various ways."

On the basis of capital-stock value, it was 11 per cent; on net book investment, 6.03 per cent; and on the I. C. C. valuation, less depreciation, 6.93 per cent. The net income figure used in these calculations was the net after deduction of taxes, including income and excess profits taxes.

More Equipment Capacity—Appraising locomotive and freight car conditions, the Bureau presents data on the aggregate tractive effort of locomotives and the capacity of freight cars. In the former connection it finds that the aggregate tractive effort of all locomotives on line increased 4.57 per cent between January, 1942, and January, 1944—from 2,148,673,000 lb. to 2,246,816,000 lb. This increase combined with a decline in the percentage of unserviceable and stored locomotives and an increase in the miles per locomotive day "accounts for the capacity of the railroads to haul the increase in the freight and passenger car-miles of 22.4 per cent, January, 1944, over January, 1942, with more weight in the cars." The data on freight cars show that their aggregate capacity likewise increased 4.14 per cent between January 1, 1942, and January 1, 1944.

From recent employment and wage statistics, the Bureau points out how "the ratio of employee compensation to revenues has declined each year since 1938 with a sharp drop to 39.27 in 1942 and a further drop to 38.65 in 1943, despite the fact that wage increases granted to railway employees for service performed in 1943 added approximately $215,000,000 to the payroll." Employee compensation was higher in 1943 than that reported for any previous year except 1920 when the Class I roads had an average of 2,022,832 employees as compared with 1,355,129 in 1943.

I. C. C. Service Orders

The Interstate Commerce Commission's Service Order No. 173, providing restrictions on routing of carload freight from Monroe or West Monroe, La., to destinations east of the Mississippi river, has been suspended until further order of the commission by Service Order No. 173-A, effective April 10.

Certain revisions in the specific tariff items set forth in the appendix to Service Order No. 189 have been made through Amendment No. 1 thereto, effective May 1. This order applies to the prohibition of certain back hauls and out-of-line hauls of grain and grain products moving under transit arrangements. The operation of Service Order No. 188, as amended, has been suspended until May 5 by Amendment No. 2, effective April 6. This order applies to demurrage charges on intra-terminal movements of refrigerator cars on the State Belt of California.

By Service Order No. 196, effective April 8, the Pennsylvania was directed to unload forthwith 2 cars loaded with coal on hand at Harrisburg, Pa., "an unreasonable length of time."

Service Order No. 193, concerning emergency rerouting of certain traffic by the Alabama, Tennessee & Northern, has been vacated by Service Order No. 193-A, effective April 10.

Wage Increase Sought in Canada

Application of 100,000 Canadian railway employees for wage increases aimed at an equalizing of their wage rates with those of eastern United States lines, is expected to reach a hearing before the Dominion War Labor Board late this month. In addition to the 100,000 employees directly affected another 50,000 to 75,000 would probably be involved in subsequent increases if the first application were granted.

Application was served on Canadian railways last July 31 by 17 railway unions for the establishment of eastern United States rates for all train operating employees, with a straight increase of 23 cents an hour for all other classifications. The application was refused by the railways and in September formal application was made by the unions to the Dominion War Labor Board.

Would Give Study Board Four More Years of Life

Senator Stewart, Democrat of Tennessee, is sponsoring a bill which would extend the life of the Board of Investigation and Research for an additional four years—until September 18, 1948. The senator had not returned to Washington when Congress reconvened on April 12 after its Easter recess; but the bill—S.1836—was introduced for him on that day by Senator Maybank, Democrat, of South Carolina.

The Transportation Act of 1940 fixed the original term of the board at two years and authorized President Roosevelt to extend it by executive order for another two years. This the President did, so the board is now scheduled to go out of existence next September 18.

Senator Stewart's interest in the board has come about as a result of the interterritorial freight rate report, in which the board went outside its statutory assignments to make, in reponse to its December, 1941, commitment to his colleague, Senator McKellar. Since the issuance of that report, Board Member C. E. Childe has been at the call of Senator Stewart whenever the latter wanted an "analysis" of any pronouncement in opposition to the report's finding that the present freight-rate structure discriminates against the South.

The board's unsuccessful effort to obtain a deficiency appropriation for the current fiscal year, reported in the *Railway Age* of March 18, page 571, would indicate that the proposal to extend its life might encounter considerable Congressional opposition, especially on the matter of obtaining the necessary appropriations. At that time the board itself had an idea for a one-year extension; but did not urge it when it became evident that there was no prospect even for the deficiency appropriation.

I. C. C. Investigation to Fix Municipal Zones

The Interstate Commerce Commission Division 5, has instituted an investigation for the purpose of determining commercial zones of municipalities throughout the United States, except where such zones have been determined in previous proceedings. The investigation will determine the areas in which motor vehicle operations are exempt from Motor Carrier Act provisions except those relating to qualifications and maximum hours of service of employees and safety of operation or standards of equipment; and fix the maximum terminal areas of motor carriers and freight forwarders.

The proceeding is docketed as Ex Parte No. MC-37, Commercial Zones and Terminal Areas.

Brings Motor Decision into Line with Court Ruling

Reporting after further hearing in the No. MC-2253 proceeding involving applications of the Carolina Freight Carriers Corporation, the Interstate Commerce Commission, Division 5, has undertaken to bring its findings into line with the United States Supreme Court's Decision in the case. The court decision, following litigation which grew out of the commission's prior report was noted in the *Railway Age* of March 7, 1942, page 503.

Generally, the court held that the certificate issued at the time of the prior report was too restricted in view of the previous operations of Carolina which conducts non-scheduled, irregular-route services between points along the Atlantic Seaboard from South Carolina to Massachusetts. In the present decision, the commission first affirmed its previous finding that Carolina is a common carrier.

It then went on to examine the operations in detail, defining in precise fashion the commodities which Carolina is entitled to handle and the territories which it is entitled to serve under its "grandfather" rights. Also, it grants a certificate covering additional operations on Carolina's showing of public convenience and necessity.

The "grandfather" certificate, as now issued, authorizes northbound operations as a common carrier of textile products, textile machinery, and asbestos textile products from 13 counties in North Carolina to described points in Maryland, Pennsylvania, New Jersey, New York, Connecticut, Rhode Island, and Massachusetts; and of textile machinery parts between points in Virginia, North Carolina and South Carolina "over irregular routes traversing Delaware and the District of Columbia, as necessary." Southbound the certificate authorizes transportation of general commodities

News Department continued on next left-hand page

Heat and Power

. . . FOR NEW ENGLAND

Prior to the war, ocean tanker delivery of oil to the Atlantic seaboard accounted for over 95% of the total reaching this territory. Today, tanker deliveries have shrunk to less than 15%, with over 85% depending on overland and inland waterway movement. Hence: such Lima-drawn, solid oil trains as this one, photographed as it was running on the Boston and Maine from Mechanicsville, New York, to Boston, with its welcome cargo of heat and power for New England homes and factories.

To the successful furtherance of this nation's drive to Victory, Lima-built Modern Super-Power Steam Locomotives serve the railroads from coast to coast in their gigantic task of supplying the almost endless needs of our home front and our fighting fronts.

LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED **INCORPORATED, LIMA, OHIO**

the additional operations authorized upon the showing of public convenience and necessity cover the transportation of textile products between points in two counties of South Carolina and destinations in the states listed in the "grandfather" certificate, and Delaware.

"Applicant's northbound and southbound operations," the commission said, "present a well-defined pattern which is typical of other irregular-route carriers domiciled in North Carolina. These carriers chiefly perform a special-commodity service northbound, dedicated to the transportation of specific commodities, such as textile products or new furniture, and a general-commodity service southbound. They usually serve a small base area in the vicinity of their headquarters in North Carolina and a much larger area in the North. Applicant's operations conform to this distinctive pattern of service, thereby indicating that its operations are similar to those of neighboring carriers and are not peculiar to it alone."

Dining Car Association Changes Its Name

The American Association of Superintendents of Dining Cars, at its first quarterly meeting in February, changed its name to the Association of American Railroad Dining Car Officers.

Bargaining Agreement Does Not Determine Craft

A collective bargaining agreement is not determinative of craft or class under the Railway Labor Act "where, on the basis of a broader consideration, the particular work involved is within another definitely established and generally recognized craft or class." The National Mediation Board has so ruled in upholding a contention of the American Train Dispatchers Association that votes of Nashville, Chattanooga & St. Louis train controllers, previously represented by the Order of Railroad Telegraphers, should be counted in an election to determine the representative of dispatchers.

The position of train controller was established by the N. C. & St. L. in June, 1943, when a centralized traffic control system was installed on its Atlanta division, and a like designation was also given to employees assigned to operate a later installation on the Chatanooga division.

When the position was established, N. C. & St. L. dispatchers were not represented by any organization; and, as the N. M. B. report puts it, the railroad agreed to extend the O. R. T. coverage to the train controllers in an undertaking "to protect its right to shift dispatchers into train controller positions without creating a dispute with the O. R. T. and without running the risk of having to assign two men, one from the telegraphers' craft and another from the dispatchers' craft to operate a single centralized traffic control machine."

Meanwhile, however, the initial train controllers seniority roster was made up of employees holding rights as dispatchers, and the train controller positions are to be filled from the ranks of dispatchers until men are no longer available from this source. Then telegraphers may bid for the positions, provided they can qualify after a period of training in dispatchers' work. Wages and conditions of employment of the controllers are comparable with those of dispatchers.

After looking over this evidence the board made its finding that the agreement with the O. R. T. was not determinative of the craft. It conceded that "much weight necessarily attaches to the grouping of employees under collective bargaining agreements," adding, however, that "such agreements not infrequently overstep craft or class lines which are otherwise well defined." The impounded ballots of the train controllers were ordered opened and counted, along with those of the dispatchers.

C. N. J. Still Needs 1,000 Additional Employees

Surveying the manpower needs of the Central of New Jersey—which of railroads in the New York terminal has for some time been particularly short of labor—Benjamin R. Miller, regional representative of the Transport Personnel, Office of Defense Transportation, has given the opinion that the war effort will be seriously impeded unless the railroad can acquire 1,000 additional employees.

Commenting upon the relief afforded the C. N. J. when O. D. T. authorized the removal of 68 suburban commuter trains from service on March 11, Mr. Miller remarked this had not been done merely to relieve the manpower shortage. Operation of a large number of suburban trains had congested terminal districts and restricted war freight in the New Jersey port area.

The major needs of the Jersey Central are for yard brakemen, towermen, mechanics' helpers and all types of shop workers, freight handlers and truckmen.

Freight Car Loading

Carloading reports were so delayed this week that the Association of American Railroads had not announced the total for the week ended April 8 when this issue went to press.

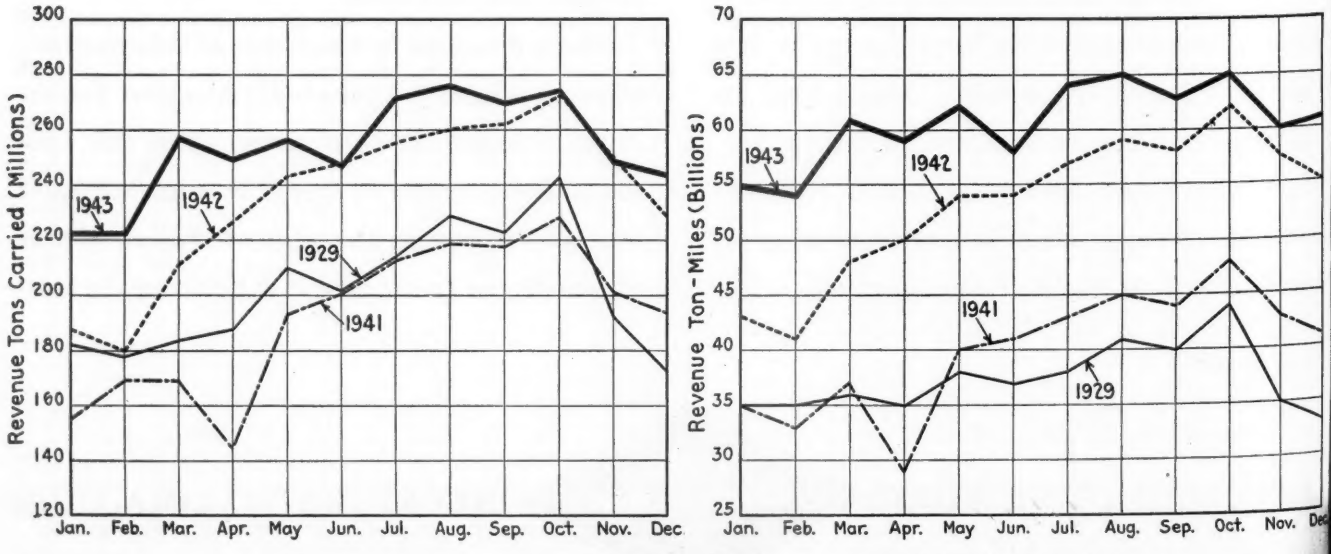
Loading of revenue freight for the week ended April 1 totaled 787,525 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R. follows:

Revenue Freight Car Loading

For the Week Ended Saturday, April 1

District	1944	1943	1942
Eastern	160,913	159,762	166,778
Allegheny	179,052	175,308	179,519
Pocahontas	53,734	51,081	53,906
Southern	118,851	120,802	131,522
Northwestern ..	86,856	78,014	118,305
Central Western	117,729	116,761	115,704
Southwestern ..	70,390	70,374	63,304
Total Western Districts	274,975	265,149	297,313
Total All Roads	787,525	772,102	829,038
Commodities			
Grain and grain products	41,110	43,326	35,337
Live stock	14,459	13,859	11,975
Coal	165,834	157,426	147,820
Coke	14,797	14,415	13,841
Forest products.	41,119	41,895	48,502
Ore	17,444	17,135	55,044
Merchandise l.c.l.	109,005	100,966	139,821
Miscellaneous ..	383,757	383,080	376,698
April 1	787,525	772,102	829,038
March 25	778,925	787,340	808,286
March 18	786,442	768,134	796,654
March 11	781,533	769,045	799,356
March 4	788,255	748,926	770,485
Cumulative Total, 14 Weeks ..	10,878,649	10,433,083	10,985,240

In Canada.—Carloadings for the week ended April 1 totaled 69,023, as compared with 69,745 for the previous week, and



Revenue Tons and Revenue Ton-Miles—1943 Compared with 1929, 1941 and 1942

News Department continued on next left-hand page

MAXIMUM POWER

FROM THE NEW TYPE "E" BOOSTER*

RECOGNIZING the trend in locomotive design toward higher boiler pressures, and noting the many new factors in current steam locomotive operation, the new Type "E" Booster has been developed expressly to meet today's conditions.

For each Booster application the proper gear ratio is selected for a given boiler pressure, wheel diameter, and adhesive weight to obtain maximum Booster power. A special starting feature enables the new Type "E" Booster to develop full initial starting effort, and a new air control assures efficient Booster operation and engagement at higher speed. Dynamic balancing contributes to smooth operation, particularly at higher operating speeds, and the roller bearing crankshaft, securely housed in the engine bed, makes for smooth running, freedom from lost motion, and long life with minimum maintenance.

*Trade Mark Reg. U. S. Pat. Off.

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NEW YORK • CHICAGO

In Canada: FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL

64,980 cars for the corresponding period last year, according to the compilation of the Dominion Bureau of Statistics.

Total for Canada	Total Cars Loaded	Total Cars Rec'd from Connections
Apr. 1, 1944	69,023	43,171
Mar. 25, 1944	69,745	43,173
Mar. 18, 1944	69,635	42,244
Apr. 3, 1943	64,980	42,165
Cumulative Totals for Canada		
Apr. 1, 1944	885,191	520,698
Apr. 3, 1943	792,736	499,555
Apr. 4, 1942	805,510	420,062

I. C. C. May Give Trucker More Rights Than He Asks

The Interstate Commerce Commission has power to authorize a motor carrier, on the ground of public convenience and necessity, to serve intermediate points on prescribed routes where service was tendered, even though such points were not actually served on the "grandfather" date, and even though the applicant motor carrier did not seek such authority, the Supreme Court of the United States has held in a unanimous decision delivered April 10 by Justice Jackson in the case, *Chicago, St. Paul, Minneapolis & Omaha* vs. *U. S.*

This case came before the court on appeal taken by five railroads operating in Minnesota and North Dakota after the commission had granted authority of this nature to the Northern Transportation Co., which subsequently was transferred to Glendenning Motorways, Inc. The decision, in which the lower court's view was upheld, turned on the commission's power, upon a finding of need based upon sufficient evidence, to issue a certificate of authority in excess of what the applicant sought, and involved also the contention that the protesting railroads had not had ample opportunity to be heard by the commission on the questions at issue because they had been thrown "off their guard" by the action of the applicant in amending the application he had filed so as to withdraw the intermediate points involved from its scope. The Supreme Court's opinion fully supported the action taken by the commission.

Chicago & Eastern Illinois Denies R. F. C. Interference

Charges that the Reconstruction Finance Corporation had interfered with policies of the Chicago & Eastern Illinois were denied by C. T. O'Neal, president of the railroad, in a statement made on April 9. The charges were made by V. V. Boatner, one of the directors, in a request, sent on April 6 to Burton K. Wheeler, chairman of the Senate Committee on Interstate Commerce, for investigation of the activities of Jesse Jones, Federal loan administrator, and of the R. F. C. in connection with the C. & E. I. Mr. Boatner charged that Mr. Jones and other R. F. C. officers and agents "used undue and improper influence in blocking reduction of debt and savings in interest charges and in interfering in other ways with the policy of the railroad contrary to the best interests of the line and the public."

The R. F. C. was given bonds of the C. & E. I. when it was reorganized and has three representatives on the board. Five of the thirteen directors are aligned with the management of the road and five with the Boatner group.

Stating that all matters of policy are presented to the company's board of directors for consideration, and that any action taken on such matter represents the majority opinion of the directors, Mr. O'Neal declared that "the management of the company has not been unduly influenced in either operating or financial matters by the R. F. C. or by any other outside source. Denying the charge that "improper influence" had been exerted by the R. F. C. in the rejection by C. & E. I. directors of a refinancing plan which was intended to reduce the road's debt and save interest charges, the head of the road pointed out that such a plan had been studied for several months by members of the board of directors, who rejected the proposal when it was found that the same retirement of debt could be made at a lower cost to the company under the optional provisions of the present mortgage and without shortening the debt maturity.

"This property was reorganized on th basis of reducing fixed obligations in orde that they could be met with any reasonabl earnings," Mr. O'Neal said. "The boar of directors was not willing to approve an plan which would increase the railroad' fixed charges. Such increases would resul under the proposed refinancing plan."

Reviewing the financial situation of th company at the time of the organizatio he emphasized that the R. F. C. provide the necessary funds to complete the reor ganization when "these funds were unob tainable elsewhere." The R. F. C. thu acquired all of the company's first mort gage bonds and the right to approve th election of 3 members of the board of 1 as long as not less than $1,000,000 in thes bonds were held by the government agency

The success of operations under the pres ent management, according to Mr. O'Nea was reflected in the annual report maile to security holders. This report showe

SELECTED INCOME AND BALANCE-SHEET ITEMS OF CLASS I STEAM RAILWAYS

Compiled from 131 reports (Form IBS) representing 135 steam railways
(Switching and Terminal Companies Not Included)

Income Items	All Class I Railways — For the month of January 1944	1943
1. Net railway operating income	$82,824,192	$105,089,14
2. Other income	14,460,311	13,602,92
3. Total income	97,284,503	118,692,06
4. Miscellaneous deductions from income	2,541,742	2,130,14
5. Income available for fixed charges	94,742,761	116,561,92
6. Fixed charges:		
6-01. Rent for leased roads and equipment	12,474,049	14,758,44
6-02. Interest deductions[1]	34,480,769	36,463,01
6-03. Other deductions	120,502	122,00
6-04. Total fixed charges	47,075,320	51,343,46
7. Income after fixed charges	47,667,441	65,218,46
8. Contingent charges	2,343,429	2,254,36
9. Net income	45,324,012	62,964,09
10. Depreciation (Way and structures and Equipment)	26,605,637	26,445,34
11. Amortization of defense projects	13,078,046	9,381,88
12. Federal income taxes	95,766,829	87,929,65
13. Dividend appropriations:		
13-01. On common stock	2,360,000	2,360,00
13-02. On preferred stock	2,563,688	2,611,42
Ratio of income to fixed charges (Item 5 ÷ 6-04)	2.01	2.2

Selected Assets and Liability Items	All Class I Railways — Balance at end of January 1944	1943
20. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	$584,763,992	$544,419,34
21. Cash	1,168,600,853	959,321,61
22. Temporary cash investments	1,774,256,072	874,093,74
23. Special deposits	195,419,752	125,929,17
24. Loans and bills receivable	210,511	316,08
25. Traffic and car-service balances—Dr.	45,602,827	41,681,11
26. Net balance receivable from agents and conductors	159,611,794	158,563,59
27. Miscellaneous accounts receivable	653,784,351	489,003,63
28. Materials and supplies	543,262,279	504,124,53
29. Interest and dividends receivable	19,779,316	14,766,66
30. Rents receivable	1,663,084	1,301,01
31. Other current assets	56,044,308	14,931,02
32. Total current assets (items 21 to 31)	4,618,235,147	3,184,032,18
40. Funded debt maturing within 6 months[2]	74,444,985	129,793,04
41. Loans and bills payable[3]	15,710,834	14,912,69
42. Traffic and car-service balances—Cr.	192,560,205	117,723,33
43. Audited accounts and wages payable	527,899,011	344,904,07
44. Miscellaneous accounts payable	108,699,997	69,712,83
45. Interest matured unpaid	46,297,432	46,890,44
46. Dividends matured unpaid	6,868,020	6,499,18
47. Unmatured interest accrued	62,934,398	69,775,72
48. Unmatured dividends declared	13,367,510	13,418,19
49. Unmatured rents accrued	18,532,769	19,026,70
50. Accrued tax liability	1,854,211,398	1,104,832,23
51. Other current liabilities	188,594,157	63,528,24
52. Total current liabilities (items 41 to 51)	3,035,675,731	1,871,223,67
53. Analysis of accrued tax liability:		
53-01. U. S. Government taxes	1,722,888,432	977,363,16
53-02. Other than U. S. Government taxes	131,322,966	127,469,07

[1] Represents accruals, including the amount in default.
[2] Includes payments of principal of long-term debt (other than long-term debt in default) whic will become due within six months after close of month of report.
[3] Includes obligations which mature not more than 1 year after date of issue.
Compiled by the Bureau of Transport Economics and Statistics, I. C. C. Subject to revision.

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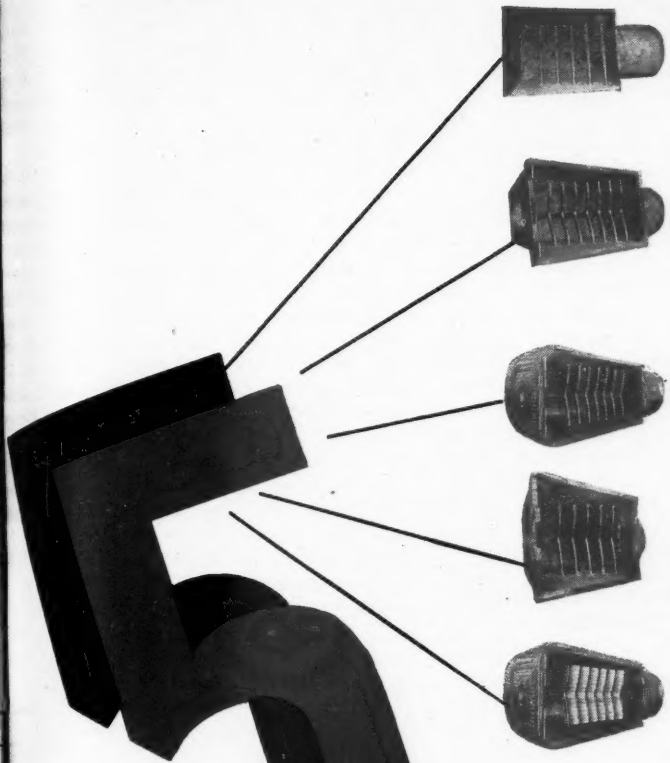

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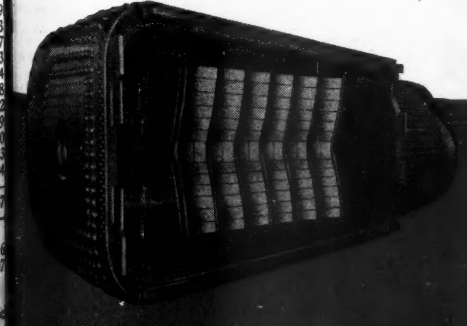
4366 SECURITY CIRCULATORS

ALL OF WHICH RESULTS IN GREATLY INCREASED *LOCOMOTIVE AVAILABILITY*



AMERICAN ARCH COMPANY, Inc.

SECURITY CIRCULATOR DIVISION

NEW YORK CHICAGO

the largest freight and passenger revenues in the history of this or predecessor companies, while, despite higher taxes and rising costs of material and labor, the operating ratio was the lowest ever recorded.

Mr. O'Neal also declared that "contrary to recent reports which have appeared in the press, mentioning a possible consolidation of the C. & E. I. and the Gulf, Mobile & Ohio, such a plan has never been a subject for consideration by the board of directors or by the officers of the company."

Job Insurance Operations Change Little in February

Unemployment insurance operations in February showed relatively little change from January, except for seasonal decreases in the number of workers experiencing initial employment, according to the April review of the Railroad Retirement Board. There were 480 applications for certificate of benefit rights and 3,130 claims for benefits filed, the report continues. Certifications numbered 2,460 and totaled $65,700. New accounts were established for 440 unemployed workers, and 45 accounts were exhausted.

Monthly benefits certified under the retirement act passed the quarter-million mark in February, and totaled 250,386 at the end of the month. Including lump-sum death benefits, cumulative payments totaled $777,337,000. February disbursements amounted to $11,343,000, of which $9,391,000 was paid to employee annuitants, $1,275,000 to pensioners, and $678,000 to survivors.

The relative importance, both in number and amount, of the various types of monthly benefits payable under the retirement act varies from year to year, the report states. On the basis of the 160,045 benefits in force on June 30, 1943, 82.3 per cent were employee annuities, 15.2 per cent were pensions, 2.1 per cent were survivor annuities, and 0.4 per cent were death-benefit annuities under the 1935 act. The largest average monthly payment was $66.10 for employee annuities, and the smallest was $31.94, for survivor annuities. The largest concentration of employee annuities beginning at age 65 or over was between $40 and $49.99; the average payment was $65.81. The highest average payment in the whole employee-annuity group was $80.16, for disability annuities based on 30 years' service.

Wood Preservers Will Hold One-Day Meeting

Again this year the American Wood-Preservers' Association will compress its annual meeting into a one-day "wartime" assembly. The program will include reports from 20 standing and special committees and 10 papers, on subjects relating to the preservation and fireproofing of wood. The meeting will be held at the Palmer House in Chicago on April 26.

Reports will be presented by committees on Preservatives; Co-ordination and Standardization of Treatment Specifications; Pressure Treatment of Oak Ties and Lumber; Pressure Treatment of Douglas Fir and Western Hemlock; Pressure Treatment of Southern Pine Ties and Lumber; Treated Wood Blocks; Pressure Treatment of Gum Ties and Lumber; Pressure Treatment of Southern Pine Piles; Pressure Treatment of Poles; Non-Pressure Treatment of Poles; Inspection; Tie Service Records; Bridge and Structural Timber; Marine Pile Service Records; Pole Service Records; Post Service Records; Diversified Uses of Treated Wood; Uses of Treated Wood for Car Lumber; and Fireproofing. In addition, the Service Bureau Board will present a report on its activities.

Subjects covered by papers to be presented will include Pentachlorophenol as a Wood-Preserving Chemical; Studies of the Biological Environment in Treated Wood in Relation to Service Life; Post-War Timber Work Adapted to Preservative Treatment; Determination of Moisture Content of Southern Pine Round Timbers; Recent Treatment Practices on the Chesapeake & Ohio; An International Termite Exposure Test; Some Properties and Uses of Fire Retardant Wood and Plywood; Fireproofed Wood; The Practical Aspects of Fire-Retardant Treatment of Wood; Fireproofed Wood for Airship Hangars.

"Pioneer Zephyr" Celebrates Tenth Birthday

On April 10 the "Pioneer Zephyr" of the Chicago, Burlington & Quincy celebrated its tenth birthday anniversary by cutting a huge birthday cake, weighing more than 1000 lb., with an eight-foot steel knife actuated by starting the train.

The ceremony took place at Lincoln, Neb., the point from which the Pioneer Zephyr started the first run of a streamlined train in revenue service, and included a national radio hook-up on which short speeches were made by several notables, who later addressed a luncheon. As a part of the ceremonies, the Pioneer Zephyr made a run between Lincoln, Neb., and Ashland, and, while no particular speed record was attempted, the 50-mile round trip was run in 55 minutes, which included the time necessary for turning the train on the wye at Ashland. The luncheon, attended by some six hundred persons, was held at the Hotel Cornhusker under the auspices of the Lincoln Chamber of Commerce. The speakers and the guests were welcomed to Nebraska and to Lincoln by Governor Dwight Griswold and Mayor Lloyd Marti, respectively. These men described what streamlined passenger service and Burlington service generally have meant to Nebraska and to Lincoln, at which later point there is a community of some 2,500 Burlington employees.

General Charles G. Dawes, former vice-president of the United States, spoke briefly and described the vast changes that had taken place in the railway service at Lincoln since he began his career there as a young attorney more than fifty years ago. Ralph Budd, president of the Chicago, Burlington & Quincy, described the steps that led up to the inauguration of this first Diesel-powered streamlined train. He predicted that, following the war, developments of railway passenger service would be fully as striking in the succeeding ten years as those of the past ten years have been. Edward G. Budd, president of the Edward G. Budd Manufacturing Co., described the problems of the car builder in producing this first streamlined steel train. He, too, predicted great developments for the postwar period and pointed out the desirability and feasibility of establishing through transcontinental streamlined trains.

Charles F. Kettering, vice-president in charge of research for the General Motors Company, described the steps which led to the adaption of Diesel-electric power to railway trains. He stated that any attempt at specific predictions as to future developments were impossible but the fact that such development would take place is unquestionable and he predicted that the Diesel-electric locomotive of the future will attain even greater efficiency.

The Pioneer Zephyr has run more than 1,679,000 miles in revenue service. It has been on various runs on the Burlington System, including the Chicago-Denver run for a short period while the Denver Zephyrs were being built. At present it is making a round trip of 456 miles per day between Lincoln, Neb., and McCook.

* * *

Poster No. 249, May Installment of the "All-the-Year—Every Year Safety Program," Now Being Distributed by the Committee on Education, Safety Section, A. A. R.

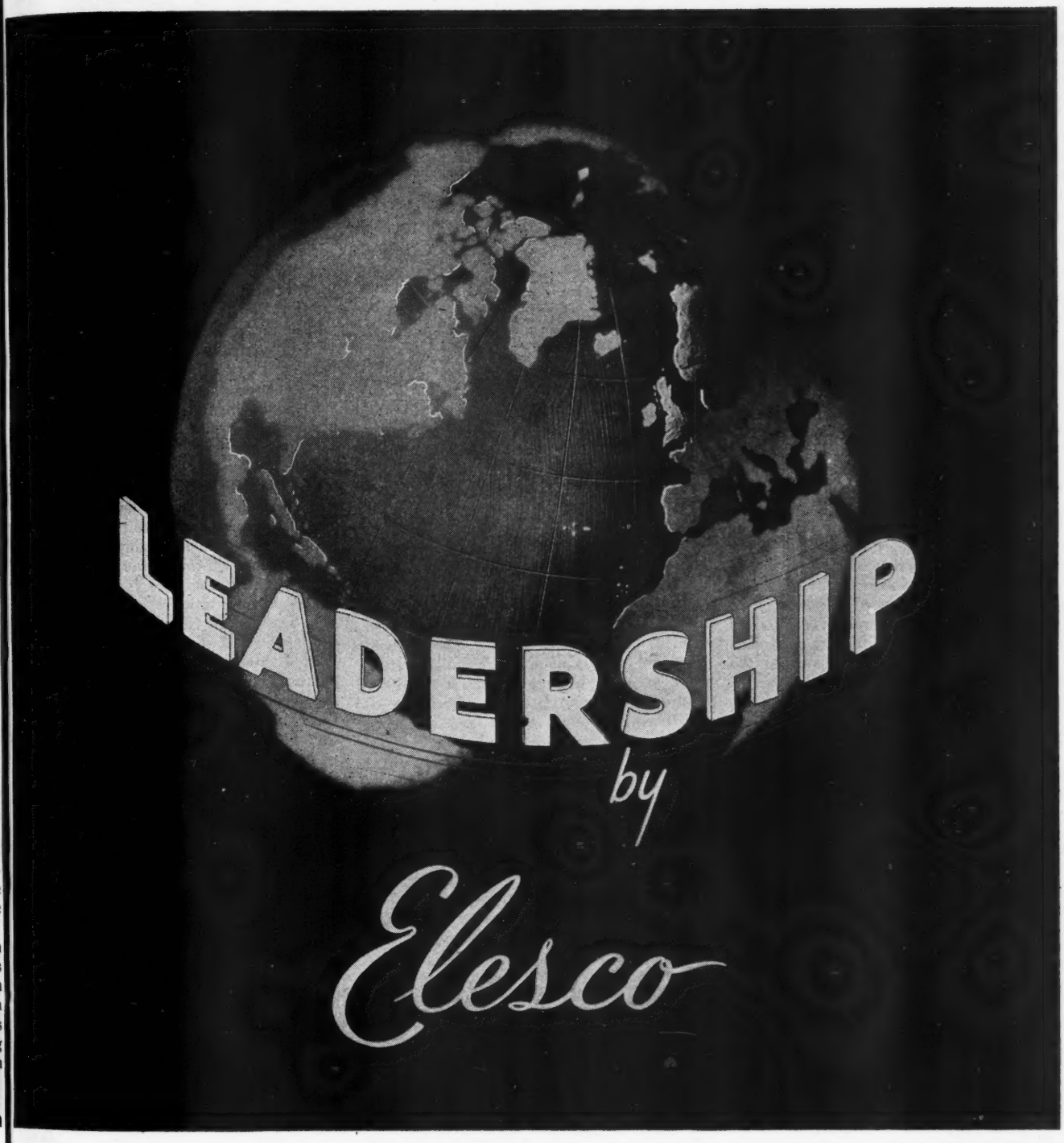
I. C. C. Reopens Truck Minimum Weights Case

Pursuant to the recent decision of the United States Supreme Court, the Interstate Commerce Commission has reopened for further hearing the I. & S. No. M-1216 proceeding wherein the prior report struck down motor carrier tariffs which undertook to publish minimum weights in excess of the capacity of a vehicle.

The condemned tariffs covered the transportation of rugs and matting from the East to Western Trunk Line territory and linoleum and related articles from the East to Ohio. The commission's decision, affirming a prior report of Division 3, was reported in the *Railway Age* of September 12, 1942, page 425, while the decision of the Supreme Court was noted in the issue of February 12, page 364.

The court remanded the case through the lower court to the commission for "sufficient explanation" to enable the parties and the courts "to understand, with a fair degree

News Department continued on next left-hand page



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of assurance, why the commission acts as it does." Meanwhile, the remanding was not "to imply that the result the commission has reached would not be sustained if a sufficient basis were supplied in the record."

The commission's reopening order assigns the case again to Division 3, and lists 11 specific matters which it wants the record of the further hearing to include. It also states that consideration will be given to calling a pre-hearing conference at the request of any interested party.

Hearing April 27 on Senator Reed's Abandonment Bill

Senator Reed's bill "to establish additional standards and to declare the policy of Congress with respect to the abandonment of railroad lines" will be the subject of public hearings to be held April 27 before a subcommittee of the Senate committee on interstate commerce. Members of the subcommittee are Senators Johnson of Colorado and Clark of Idaho, Democrats, and Mr. Reed, Republican of Kansas.

As noted in the *Railway Age* of November 6, 1943, page 737, the bill—S. 1489—would declare the policy of Congress "not to permit the abandonment of railroads, once constructed and placed in operation as common carriers and thereby dedicated to the public use, unless and until it shall conclusively appear that the efficiency of the national transportation system will be increased thereby." To carry out this policy the bill proposes an amendment to paragraph (19) of the Interstate Commerce Act's section 1 which would preclude issuance by the Interstate Commerce Commission of abandonment certificates unless specified conditions were met.

Personnel Needs Rise to 101,000

Estimated personnel needs of the railways as of March 1 amounted to 101,000, compared with 97,000 a month earlier and 109,000 in January, according to a report of the United States Railroad Retirement Board.

This estimate for the entire industry is based on reports from 198 employers which showed a need for 94,400 additional workers. Labor market conditions continued to improve in the Far West but the anticipated opening of the Great Lakes ore shipping season and the beginning of spring track maintenance work expanded needs on the northern and eastern roads.

The needs as of March 1 were greater in all but one of the seven occupational groups. The largest numerical rise was in unfilled jobs for laborers, which reflected chiefly an increased need for trackmen. Resumption of maintenance-of-way activities increased the need for bridge-and-building carpenters, mechanics and painters, while increases also occurred in needs for carmen, boilermakers, inspectors and machinists. Unfilled jobs in train-and-engine service and in executive, professional, telegraph and clerical staffs were 6 and 5 per cent larger, respectively.

The amount of unsatisfied demand for labor continued to decrease in the Far West but increased in the East and North. An increase of 24 per cent in the needs in the New England and Middle Atlantic states resulted chiefly from requirements for additional track laborers, freight handlers, and skilled shop and construction workers.

Personnel Needs of Employers Reporting for Both February and March[1]

Occupational group	March 1, 1944 Needs reported: Number	Per Cent of Total	Per Cent of February
1. Executives, professional men, telegraphers, and clerks	3,974	4.6	104.8
2. Trainmen and enginemen	6,645	7.7	106.2
3. Skilled trades journeymen	12,344	14.4	110.6
4. Skilled trades helpers and apprentices	11,849	13.8	100.6
5. Laborers	48,816	56.8	104.8
6. Attendants, cooks, porters and waiters	1,355	1.6	71.8
7. Miscellaneous	917	1.1	107.4
Total	[1]85,900	100.0	104.4

[1] The total of personnel needs reported in this table is smaller than the number mentioned in the text above since it excludes the needs of those employers who did not also report for February.

Atlantic Shippers Size Situation Up

(Continued from page 741)

I. Comparing also freight and express hauled "now" and "then," Mr. Kendall disclosed that thus far 150 million tons have been carried, eight times that of the entire last war. He made plain that as the war is brought closer to the enemy, carriers and shippers and receivers of freight will need to put forth every effort to meet the accelerated transportation demands. Their record to date he views as "gratifying."

"Time is life, and a waste of time in getting a shipment through may mean a waste of life on the firing front," warned Lt. Col. C. D. O'Neal, transportation officer, Jersey City Army Quartermaster Depot. Giving an account of efforts to conserve car supply at his base, he observed they were doing "very well, but not good enough." They aim to unload all cars within 24 hours, explained Colonel O'Neal, but this record has not yet been achieved.

They Don't Hold Cars—Reporting more than 2,000 cars inbound and outbound from his depot for the first quarter of the year, Colonel O'Neal presented a detailed breakdown of their movement. "Of the inbound we unloaded before free time 310 cars; during the first day of free time 597 cars were unloaded, and 387 cars during the second day. There were 123 cars unloaded after 48 hours. Within free time more than 91 per cent of all inbound cars were unloaded. All of the outbound cars were loaded within 24 hours. There were 439 net credits on inbound and 562 on outbound," he concluded.

A "must" in maintaining the "enviable record of car efficiency" at the Naval Supply Depot, Mechanicsburg, Pa., was described by Lt. F. Gordon Blee, shipping officer, as "close teamwork on the part of everyone involved, civilian and officer alike." Lt. Blee told of cars handled in January as a case in point. "During that month," he stated, "the Depot received 1,560 carloads, of which 971 cars or 62 per cent were unloaded and released the first free day; 373 cars, or 24 per cent released the second free day; 122 cars or 8 per cent released on the third day after placement which was the first demurrage day; and 75 cars, or 5 per cent released on the fourth or second demurrage day. This accounts," he continued, "for 99 per cent of the total cars received. The remaining 19 cars were released on the third and fourth demurrage days."

See Slight Traffic Decline—Shippers heard a forecast of a 0.5 decrease in loadings of all commodities for the second quarter of 1944. It is anticipated there will be an increase of 4.4 per cent in grain, 18.9 in coal and coke, a decrease of 24.1 per cent in gravel, sand and stone, and a 40 per cent decrease in cement. Iron and steel carloadings are expected to decline 2.5 per cent and lumber and forest products 4.2 per cent.

Col. J. Monroe Johnson, director, Office of Defense Transportation, in a letter to E. A. Jack, general chairman, Perfect Shipping Campaign committee, directing its nation-wide drive throughout April, wrote that "Waste of manpower, materials and manufacturing facilities is not to be condoned at any time."

"The Perfect Shipping Campaign now in progress is essentially a fight against waste," continued Col. Johnson, "for loss of any shipment through careless handling or improper loading is a waste not only of time, labor and materials, but of transportation as well. Conversely, everything done to insure the safe delivery of any shipment and avoid this waste is one more blow at our enemies."

No. 28,300 Proposed Report; Will Be Argued with 28310

The Interstate Commerce Commission will serve no proposed report in its No. 28300 investigation of the class rate structure, but will hear oral argument upon the record and the briefs already filed "at the same time and together" with the argument in the No. 28310 investigation of the Consolidated Freight Classification. This was revealed in an April 11 notice which assigned the argument for June 14 at 10 a.m. at Washington, D. C., and canceled the May 10 argument previously announced for 28310 alone.

The notice stated that the argument had been consolidated because the cases are "interrelated." The examiner's proposed report in 28310, recommending a uniform classification for country-wide application, was reviewed in the *Railway Age* of December 11, 1943, page 933.

Representation of Employees

The Congress of Industrial Organizations' United Transport Service Employees of America has supplanted the Brotherhood of Railway Clerks as the Railway Labor Act representative of the Savannah Union Station Company's clerical, office, station, and storehouse employees. It won by a vote of 35 to 33 in a recent election certified by the National Mediation Board.

Meanwhile, the B. of R. C. has won the right to represent the previously unrepresented clerical, office, station, and store-

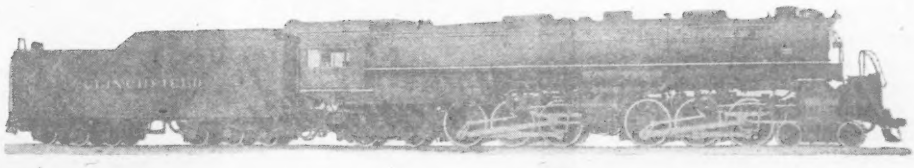
News Department continued on next left-hand page

KEEPING PACE WITH THE NATION'S NEEDS

Locomotive Characteristics

Weight on Drivers	420,000 Lb.
Weight of Engine	607,000 Lb.
Cylinders (Four)	22 x 32 Ins.
Diameter of Drivers	69 Ins.
Boiler Pressure	265 Lb.
Tractive Power	101,120 Lb.
Tender Capacity—Fuel	26 Tons
Tender Capacity—Water	22,500 Gals.

Eight Alco 4-6-6-4's, were delivered to the Clinchfield in 1943. This makes another road which has taken advantage of the capabilities of this high-speed, heavy tonnage locomotive.



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BUY WAR BONDS

house employees of the Burlington Refrigerator. Express Company. In other recent elections, the Brotherhood of Locomotive Engineers and the Switchmen's Union of North America retained their respective certifications as representatives of engineers, firemen, and hostlers employed by the Union, and yardmen (foremen, helpers and switchtenders) employed by the Fort Worth Belt. The former had been challenged by the Brotherhood of Locomotive Firemen & Enginemen, and the latter by the Brotherhood of Railroad Trainmen.

March Employment 5.59 Per Cent Above March, 1943

Railroad employment increased another 1.15 per cent—from 1,383,917 to 1,399,848—during the one-month period from mid-February to mid-March, and the March total was 5.59 per cent above the comparable 1943 figure, according to the latest summary of preliminary reports prepared by the Interstate Commerce Commission's Bureau of Transport Economics and Statistics. The index number, based on the 1935-1939 average as 100 and adjusted for seasonal variation, was 140.7 for March, compared with February's 139 and March, 1943's 133.2.

March employment in all groups was above both the previous month and March, 1943. The increases above February ranged from 3.01 per cent for the maintenance of way and structures group to 0.31 per cent for executives, officials, and staff assistants. The range of the increases above March, 1943, was from 8.85 per cent for the maintenance of way and structures group to 1.4 per cent for train and engine service employees.

C. N. J. Survey to Improve Present Train Schedules

On all eastbound suburban trains in the New York zone, for a 24-hr. period on April 17, the Central of New Jersey will distribute questionnaires inviting passengers' opinion of the present 300 trains being run each weekday, and suggestions for their possible respacing to provide improved service. Additional copies of the survey will be available at all ticket offices to assure that every commuter has opportunity to present his views. At least 25,000 replies are expected.

In making the announcement, Walter V. Shipley, passenger traffic manager, explained that "the emergency readjustment carried out March 12 (removal of 68 commuter trains) by order of the Office of Defense Transportation has worked surprisingly well," but the railroad desires to improve present schedules as much as is possible "under wartime conditions."

All suggestions will be studied and tabulated, and as a result of the questionnaires, new schedules will probably go into effect by mid-June.

Taxes Exceed Freight Charges to Government

The government is paying the railroads about $100,000,000 a year less for the transportation of war freight than the railroads are paying the government in federal income taxes, according to Z. G. Hopkins, of the Western Railways' Committee on Public Relations, in an address before the Kiwanis Club at Des Moines, Iowa, on April 5. "It may be said, therefore," Mr. Hopkins continued, "that the cost of rail movement of a record breaking load of army and navy freight—a load rated by responsible officers of the war department as six times heavier than the army and navy freight load in World War I—is not adding a dime to the current tax bills of other tax payers.

"Federal income tax payments by the railroads last year amounted to $1,334,894,088. The Interstate Commerce Commission Bureau of Statistics recently estimated that government expenditures for the transportation of freight, including express shipments, were approximately $1,200,000,000 in the twelve months ending with June, 1943. Payments for freight service in the full calendar year of 1943 probably were somewhat in excess of that amount, the tempo of offensive military operations having been stepped up as the year advanced.

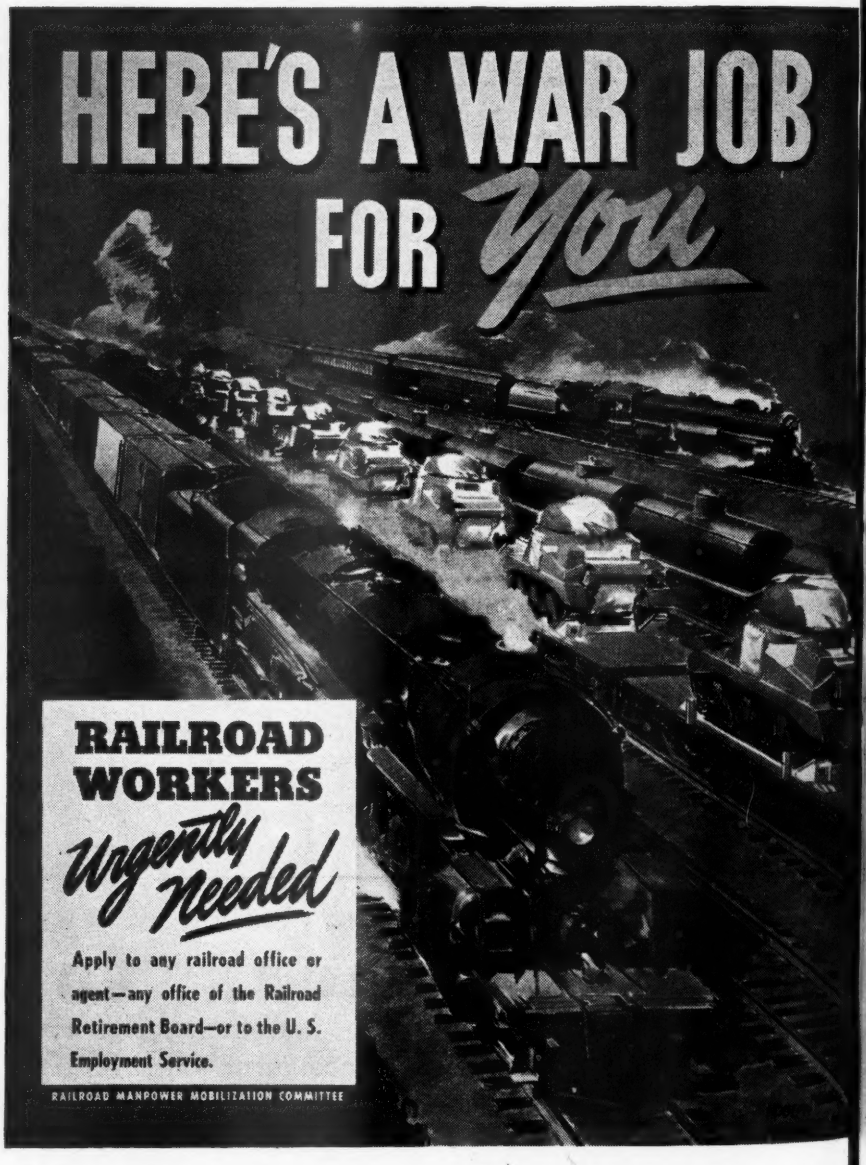
"The I. C. C. Bureau stated, however, when the $1,200,000,000 estimate was released, that the comptroller general expects to recover 10 per cent of that total when final settlements are made under land grant provisions of the law. If the comptroller general's expectations in this respect are realized, it is fair to estimate the government's actual expenditures for rail freight transportation in 1943 at an amount not greatly in excess of $1,250,000,000." The amount by which wartime payments to the railroads for the transportation of government freight is falling short of the amounts paid to the government by the railroads in federal income taxes consequently stands out clearly.

Club Meetings

The Eastern Car Foreman's Association will next meet April 14, at 8 p. m., in the Engineering Societies building, 29 West 39th street, New York. The "A. A. R. Rules of Interchange" will be discussed by W. R. Dunbar, divisional car foreman, Delaware & Hudson (Oneonta, N. Y.).

Robert E. Butterfield, former locomotive engineer on the New York Central's Twentieth Century Limited, will address the New York chapter of the Railway Locomotive

* * * *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Railroad Manpower Mobilization Recruiting Poster, Published by the Association of American Railroads

News Department continued on next left-hand page

Keep 'em Moving To The Front

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It is significant that the majority of these locomotives are equipped with wear-resisting parts made from HUNT-SPILLER *Air Furnace* GUN IRON.

The resistance of HSGI parts to frictional wear and high superheat temperatures helps to reduce running repairs, increase availability and reduce fuel consumption. Standardization on all the parts listed below will keep your power rolling to the front for a lower cost.

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& Historical Society when it meets April 21, at 7:45 p. m., in the Engineering Societies building, 29 West 39th street, New York. His topic will be: "A Practical Locomotive Engineer Views the Future of Railroads."

The spring meeting of the Society for Experimental Stress Analysis will be held at Hotel Statler, Boston, May 18-20. It will include a symposium on residual stresses, their measurement and effects. All inquiries should be addressed to the Society, P. O. Box 168, Cambridge 39, Mass.

The "Military Railway Service" will be discussed by Lt. Col. Frank E. Cheshire, U.S.A., commanding officer, Camp Millard, Bucyrus, Ohio, at the April 27, 8 p. m. meeting of the Railway Club of Pittsburgh, at the Fort Pitt Hotel.

The Canadian Railway Club will next meet May 8 at 8 p. m., at the Windsor Hotel, Montreal. The evening is to be devoted to entertainment.

The Western Railway Club will next meet April 17, at 7 p. m., in Hotel Sherman, Chicago. J. E. Davenport, vice-president, engineering development and research, American Locomotive, will be the principal speaker. There also will be dissertation by other builders.

"Locomotive Boilers" will be discussed by Franklin T. Litz, general boiler foreman, Chicago, Milwaukee, St. Paul & Pacific, at the next meeting of the Northwest Locomotive Association, to be held at 8 p. m., April 17, in Woodruff Hall, St. Paul.

At the April 18, 8 p. m. meeting of the Car Department Association of St. Louis, in Hotel DeSoto, Rev. K. Carl Ketcherside, evangelist, will speak on "Safety."

Rise in Rail-Air Express

Air express shipments in combined rail-air service rose 32.8 per cent in January, the air express division of Railway Express Agency reports. In the combined service 38,257 shipments were handled, compared with 28,810 in the same month a year ago. Express charges on this traffic increased 39.3 per cent over January, 1943.

GLASS BLOCKS for enginehouses are finding favor on the New York, New Haven & Hartford. In the interests of modernity, but mainly for economy, the railroad has replaced ordinary glass windows in four of its enginehouses, with the newer glass bricks. It is expected this will appreciably reduce maintenance expenditures on the old glass, which always had run into a major figure. Similar treatment is being considered for the Providence and East Hartford enginehouses and shop buildings at Readville. The bricks, it is said, afford maximum distribution of light.

"VISION UNLIMITED" is the title of a 16-page booklet, summing up as many years of growth and development of commercial air transportation in America, now being distributed by the Air Express division, Railway Express Agency. Illustrated and in color, there is a description of the first scheduled flight in 1927, photographs of early airports, and several "then" and "now" comparisons. There is also a "hint of tomorrow."

Equipment and Supplies

LOCOMOTIVES

The NEW YORK CENTRAL has placed an order for one experimental steam locomotive of 4-8-4 wheel arrangement with the American Locomotive Company.

SIGNALING

The CENTRAL OF GEORGIA has authorized the installation of automatic signals on 119 miles of its line between Columbus, Ga., and Birmingham, Ala., at an estimated cost of $503,600.

FREIGHT CARS

Large Car Orders in March Cause Increase in Backlog

Orders for new freight cars reported in issues of the *Railway Age* during March totaled 12,535 cars of which 12,435 were placed by twelve railroads and 100 by the American Refrigerator Transit Company. The railroads' orders were divided 2,225 to railroad shops and 10,210 to contract builders. Total March purchases included 5,100 box, 7,235 hopper, 100 stock and 100 refrigerator cars. Among the larger orders placed were 5,000 all steel hopper-coal cars of 50 tons' capacity by the Chesapeake & Ohio; 1,000 50-ton box cars by the Southern; 1,000 55-ton box cars and 1,000 55-ton hopper cars by the New York Central and 2,000-ton box cars by the Chicago & North Western. Other orders during the month are listed in detail in the accompanying table.

The large volume of freight car buying currently taking place has resulted in a further increase in the backlog of cars on order and undelivered. As of April 1, the backlog had increased to about 45,000 cars, as compared with 43,300 on March 1 and 38,100 at the end of 1943. Of the 45,000 cars, 28,400 were on order with contract car builders and 16,600 with railroad shops. The number of cars on order but without War Production Board authorization to build was reduced during the month to 3,200 at April 1 from 3,900 at March 1. The 41,800 authorized for building were divided about as follows: 500 remaining to be shipped of the number authorized from third quarter, 1943 materials; 4,000 from fourth quarter, 1943 materials; 9,900 from first quarter, 1944 materials; 15,500 released in advance from second quarter, 1944 materials; 9,800 from third quarter, 1944 materials, and 2,100 from fourth quarter, 1944 materials.

The CHICAGO & EASTERN ILLINOIS is inquiring for 200 hopper cars of 50 tons' capacity.

The NORFOLK & WESTERN is inquiring for 500 box cars of 50 tons' capacity.

The REYNOLDS METALS COMPANY is reported to be in the market for 25 box cars of 50 tons' capacity.

The ST. LOUIS-SAN FRANCISCO is inquiring for 50 hopper cars of 70 tons' capacity.

The WESTERN PACIFIC has issued an inquiry for 100 gondola cars of 70 tons' capacity.

The NATIONAL TUBE COMPANY is reported to be in the market for 30 hopper cars of 70 tons' capacity.

PASSENGER CLASS DISTINCTION, while now somewhat "simplified" in European countries, are still observed in South Africa, notes a recent Railway Gazette (London). On the South African Railways "the management sets apart any portion of a train for males and females, persons of particular races, or different classes of persons, or natives.

"The management may refuse to carry a passenger in any other portion of the train than that reserved for his kind, and stationmasters, trainmen, and other specified attendants are authorized to remove a passenger from one compartment to another without assigning a reason. Moreover, the administration may refuse to issue a first or second-class ticket to any passenger, who, in the opinion of a responsible supervising officer, may not be dressed in a decent or clean manner. Portions of railway premises, refreshment cars, and conveniences, may be restricted similarly."

Freight Car Orders Reported in the Railway Age in March, 1944 (Including April 1 Issue)

Date	Name of Company	No.	Type	Builder
Mar. 11	Chesapeake & Ohio	2,500	Hopper-coal	American Car & Foundry
		1,250	Hopper-coal	General American
		1,250	Hopper-coal	Pullman-Standard
Mar. 11	Central of Georgia	10	Hopper	American Car & Foundry
Mar. 11	Southern	1,000	Box	Mount Vernon
Mar. 18	Erie	600	Hopper	Greenville Steel Car
Mar. 18	Minneapolis & St. Louis	500	Box	General American
Mar. 18	Delaware Lackawanna & Western	250	Box	Magor Car
		350	Box	American Car & Foundry
Mar. 18	Nashville, Chattanooga & St. Louis	200	Hopper	Pullman-Standard
Mar. 25	New York Central	1,000	Box	Despatch Shops
		1,000	Hopper	Despatch Shops
Mar. 25	American Refrigerator Transit	100	Refrigerator	Company Shops
Mar. 25	Chicago & North Western	800	Box	American Car & Foundry
		600	Box	General American
		600	Box	Pullman-Standard
Mar. 25	Lehigh & New England	300	Hopper	Bethlehem Steel
Apr. 1	Illinois Terminal	125	Hopper	Company Shops
Apr. 1	Missouri Pacific	100	Stock	Company Shops

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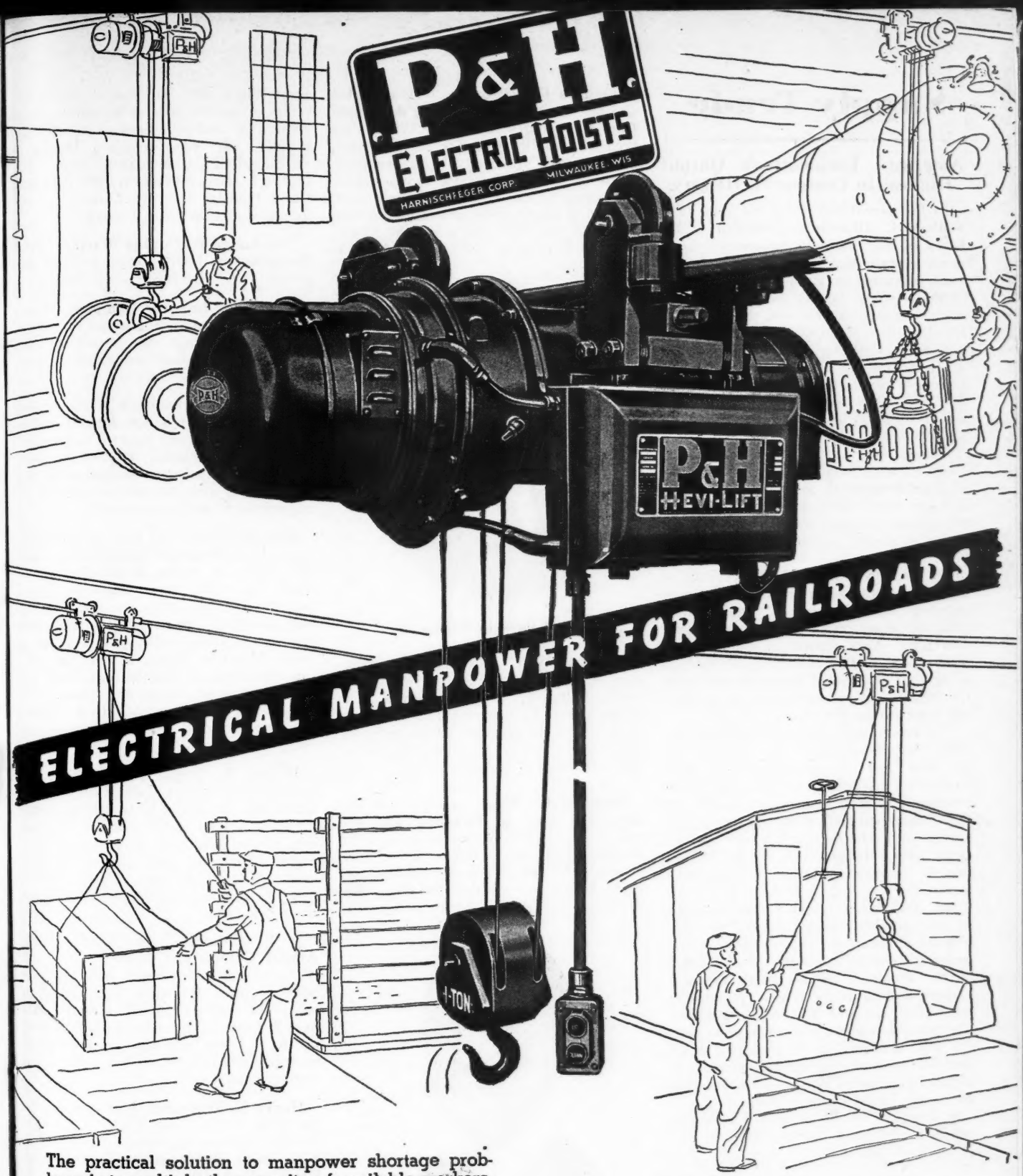

The practical solution to manpower shortage problems is to multiply the capacity of available workers. For example:

One man alone can lift, move and accurately place loads up to 15 tons with a P&H Hevi-Lift. Electricity does the heavy work. All the handler does is press buttons.

A Hevi-Lift pays for itself wherever heavy loads are handled—in shops, yards, warehouses, terminals, etc. Prove it to yourself by installing one in any of these spots.

A wide selection of mountings make Hevi-Lifts adaptable to any installation requirements. P&H's 60-year experience in building electrical materials handling equipment insures your getting the best in a heavy-duty hoist.

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Supply Trade

American Locomotive's Output Highest in Company's History

In his annual report for the year 1943, William C. Dickerman, chairman of the board of the American Locomotive Company, reveals that production reached a level never before attained in the history of the company, largely the result of production of materials for war. Sales volume for 1943 was $428,905,000, as compared with $302,492,000 for 1942. Unfilled orders at December 31, 1943, were $275,000,000, as compared with $654,000,000 at December 31, 1942. Net profit carried to surplus amounted to $6,626,515, as compared with $5,051,593 for 1942.

During the year, shipments against war contracts were 84.6 per cent and shipment of regular products on commercial orders 15.4 per cent of total shipments, which latter volume exceeded by 10 per cent shipments of similar products in the previous year.

On December 31, 1943, 70 per cent of unfilled orders comprised war contracts, of which one half were for regular products, and 30 per cent comprised commercial contracts. Net increase in plant investment was $1,371,000, practically all of which is covered by United States Government Certificates of Necessity providing for special amortization over the war period.

The report stated that the pressing demand for locomotives, the progress of the war, and the development of new sources of production for specialized war products combined to make it possible for the company to shift gradually during the year from specialized war products such as tanks, gun carriages, etc., to its regular line of products relating to locomotive power.

Mr. Dickerman reported that the plan of consolidation and merger, for the purpose of effecting a recapitalization of the company's capital structure and elimination of the arrearage of preferred dividends without large drain of vital current working capital, has been practically completed. The plan has enabled the company to meet the full dividends on its preferred stock and sinking fund requirements thereon, and to pay a dividend of 50 cents per share upon the newly issued common stock.

A summary of the company's operating results for 1943 and a comparison with 1942 is set forth hereunder:

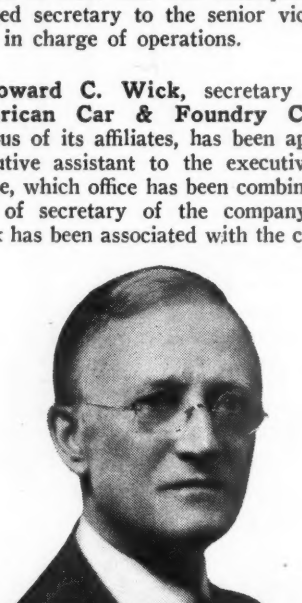
	1943	1942
Gross sales	$428,905,657	$302,492,426
Cost of goods sold	386,787,994	268,942,401
Depreciation	2,479,930	2,775,419
Profit from operations	$39,637,733	$30,774,606
Other income	895,209	491,207
Other charges	106,427	114,220
Provision for income taxes	34,828,000	26,000,000
Debt retirement and post-war credits on excess profits taxes	3,728,000	2,400,000
Provisions for contingencies and post-war adjustments	2,700,000	2,500,000
Net profit	$6,626,515	$5,051,593
Current assets	$87,682,660	$67,842,823
Current liabilities	59,091,417	42,904,918

Thomas F. Wilson has been appointed assistant to the president of the **American Car & Foundry Co.** Mr. Wilson had been assistant to Frederick A. Stevenson, newly-elected president of the company, when the latter was senior vice-president. He began his career with the New York Central in March, 1906, and continued with that road until 1916. He joined the American Car & Foundry Co. in June, 1916, as

Thomas F. Wilson

secretary to W. C. Dickerman, now chairman of the board of the American Locomotive Company. Following service as an ensign in the Navy during 1918-19, he returned to a.c.f. and was subsequently appointed secretary to the senior vice-president in charge of operations.

Howard C. Wick, secretary of the **American Car & Foundry Co.** and various of its affiliates, has been appointed executive assistant to the executive committee, which office has been combined with that of secretary of the company. Mr. Wick has been associated with the company



H. C. Wick

for 39 years. During his early career he was employed successively with the Ferracute Machine Company, the Atlantic Refining Company, the American Bridge Company, and the Chase National Bank. He joined the American Car & Foundry Co. as assistant to the secretary in 1905. He served as secretary to the president from 1910 to 1916 and was appointed secretary of the company, of its wholly-owned subsidiaries and of several of its affiliates, in 1916. Mr. Wick is also a director of the American Car & Foundry Motors Co., the a.c.f. Motors Company, the American Car & Foundry Securities Corporation, and the American Welding Company.

The **Lodge & Shipley Machine Tool Company** has been awarded a fourth star to add to its Army-Navy "E" flag.

The Ohio Injector Company, Wadsworth, Ohio, has been awarded the Army-Navy "E" pennant with three stars for continued meritorious production achievement.

J. A. V. Scheckenbach, whose election as a vice-president of the **American Car & Foundry Co.** was reported in the *Railway Age* of December 4, 1943, has been appointed in charge of manufacturing for the company and also will have charge of improvements and maintenance.

Carl W. Blum has been elected president of the **Dolphin Paint & Varnish Co.** to succeed **Julius Blum** who has retired. Mr. Julius Blum began his career with Dolphin as works manager in 1918, was appointed vice-president and general manager in 1928, and elected president in 1940. Mr. Carl Blum, a son, has been superintendent of Dolphin since 1922, and vice-president in charge of research, production and sales since 1929. **L. E. Comes** has been elected secretary and treasurer of the company.

Robert S. Coffin, vice-president, has been elected president of the **Bailey Meter Company,** to succeed **E. G. Bailey,** president and founder of the company, who has been elected chairman of the board. Mr. Coffin joined the Bailey Meter Company as treasurer at the time of its organization in 1916 and has been vice-president since 1925.

J. K. Gannett, vice-president of the **Austin Company,** Cleveland, Ohio, and its Eastern district manager since 1928, has been appointed director of engineering, in charge of engineering and research. **Albert S. Low,** vice-president at Washington, and **A. F. Plant,** vice-president and district manager at Detroit, Mich., have been elected directors.

Henry E. Hermann, plant engineer of the John Deere Plow Works in Moline, Canada, has been appointed works manager of the **Bear Maufacturing Company, of Rock Island, Ill.**

H. H. Pancake, formerly engineer-mine car construction, for the **American Car & Foundry Co.,** has been transferred to the Pittsburgh, Pa. district sales office as sales engineer and **J. F. Miller,** sales agent at Pittsburgh, has been transferred to the Berwick, Pa. plant in a sales capacity.

D. J. Peterson, manager of the Detroit, Mich., branch of the **Minneapolis-Honeywell Regulator Company,** has been appointed in charge of the heating control division of the entire Cleveland, Ohio zone. This area includes territories covered by Cleveland, Detroit, Buffalo, N. Y., Cin-

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cinnati, Ohio and Pittsburgh, Pa. Mr. Peterson has been with the Minneapolis-Honeywell Regulator Company for the past 18 years. He will continue to make his headquarters in Detroit.

Ceremonies dedicating the opening of the Gary, Ind., plant of the **Tubular Alloy Steel Corporation,** a subsidiary of the United States Steel Corporation, were held on April 5. The plant was developed at the suggestion of the Office of Production Management and under arrangements whereby Tubular Alloy owns the land, plant buildings and service facilities and leases all equipment, including machine tools, motors and production machinery, from the Defense Plant Corporation. The plant makes alloy seamless and stainless steel tubing of all types.

George P. Torrence, vice-president and general manager of the Rayon Machinery Corporation, Cleveland, Ohio, has been elected president of the **Cleveland Pneumatic Tool Company** and its subsidiary, the Cleveland Pneumatic Aerol Inc., and **Daniel C. Green,** former president, has been elected chairman of the board of both companies. Mr. Torrence was formerly associated with the Link Belt Company of Chicago and was president of that company from 1932 to 1936. Mr. Green's service with the Cleveland Pneumatic Tool Company began in March, 1942 when he was elected a director and chairman of the board, which positions he took as a war assignment intending to return to the professional consulting field when his work was completed. He was elected president in June, 1943.

TRADE PUBLICATIONS

CINDER PLANTS.—The Ross & White Company, Chicago, has published an illustrated bulletin describing its "N and W" type electric cinder plants for railroad locomotives. Designated as No. 53, the bulletin includes a number of photographs, showing construction details of the units, the weatherproof operating controls, the hopper of the cinder plant, open and closed, and several plants installed on different railroads.

Construction

ATLANTIC COAST LINE.—This railroad has awarded a contract for the construction of a second track, 2.11 miles long, from Appomattox river to Collier, Va., at estimated cost of $222,200, to A. S. Wikstrom and F. D. Cline.

CANADIAN PACIFIC.—A building, to centralize the services necessary for the efficient operation of sleeping, dining and parlor cars, will be constructed by the Canadian Pacific at Glen Yard, Montreal. Dining car offices will be located in the new building, and there will be roomy refrigeration compartments for perishables, and storage space for linens, silverware, etc. There will be a tailor shop to repair and service uniforms, a sewing room for inspection of table and bed linens, and separate lunch rooms for men and women employees.

ERIE.—This road has awarded a contract to the DeHamel Construction Company, Cleveland, Ohio, for the construction at Ashland, Ohio, of a brick and concrete passenger station and a two-story freight house. The passenger station will measure 32-ft. by 120-ft., and the freight house will measure 30-ft. by 104-ft. The latter will also be of brick and concrete construction and will be equipped with a covered concrete platform. The work will include grading for tracks and pavement, installation of pavement, and rearrangement and construction of drainage and platforms.

WABASH.—This railroad has awarded a contract for repairs and alterations to its bridge at Worth, Ill., at estimated cost of $60,000, to the Bates & Rogers Construction Corp.

WAR DEPARTMENT.—The U. S. Engineer office, Philadelphia, Pa., has awarded a contract, amounting to $883,375, to the Buffalo Gravel Corporation, Camp Hill, Pa., for the construction of railroads, roads, earth fill track barricades, drainage facilities and incidental work for a 200-car storage yard in Delaware.

Financial

DETROIT, TOLEDO & IRONTON—*Modification of Mortgage.*—Division 4 of the Interstate Commerce Commission has authorized this road to apply to an additional $1,000,000 of its first and refunding mortgage gold bonds, series A, the modifications already approved as to $9,626,000 thereof, as outlined in *Railway Age* of October 11, 1941, page 598.

BUSH TERMINAL.—*Lease.*—In a proposed report, Examiner W. J. Schutrumpf has recommended that the Interstate Commerce Commission authorize the Bush Terminal Railroad Co. to operate under lease the trackage and other railroad facilities of the Bush Terminal Co. Some 13.56 miles of line at Brooklyn, N. Y., is involved. Among the expected results of the transaction would be the removal of "various legal and practical anomalies incident to the present operations," simplification of corporate relations and accounting, and clarification of the jurisdiction of regulatory agencies over the railway operations of the terminal.

Railroads serving New York harbor intervened in the proceedings to ask the commission to require the lessee road, if the proposal should be approved, to reinstate, in certain terminal buildings now served by the lessor, the public l.c.l. freight station facilities and car service which were provided prior to August 22, 1942, by or at the expense of the terminal company. Since that date such l.c.l. traffic has been handled by a pick-up and delivery truck service operated by the terminal company as agent of the trunk line railroads, but the parties have not been in agreement as to how this operation applies to the buildings in question, it being the view of the railroads, the examiner points out, that the various Bush companies have developed a way to "coerce" them into agreeing to bear the cost of truck service to and from these buildings. On these issues, the examiner remarks that, "if the parties cannot agree upon mutually satisfactory terms, they no doubt are familiar with the procedure necessary to secure adjudication of the questions involved," and finds that the record does not justify making the restoration of the l.c.l. rail service a condition to approval of the lease.

CHICAGO, GREAT WESTERN.—*Annual Report.*—The 1943 annual report of this road shows a net income, after interest and other charges, of $2,705,827, as compared with $2,617,491 in 1942.

Selected items from the income statement follow:

	1943	Increase or Decrease Compared With 1942
Average Mileage Operated	1,500.17	−1.53
RAILWAY OPERATING REVENUES	$30,432,425	+$4,966,771
Maintenance of way and structures	3,686,564	+688,886
Maintenance of equipment	3,485,545	+251,004
Transportation	10,087,698	+1,501,416
TOTAL OPERATING EXPENSES	18,809,007	+2,498,944
Operating ratio	61.81	−2.24
NET REVENUE FROM OPERATIONS	11,623,418	+2,467,827
Railway tax accruals	5,753,142	+2,468,920
RAILWAY OPERATING INCOME	5,870,276	−1,093
Net rents—Dr.	2,146,945	−21,880
NET RAILWAY OPERATING INCOME	3,723,331	+20,787
Total other income	123,667	+23,675
TOTAL INCOME	3,846,998	+44,462
Rent for leased roads and equipment	103,919	+86
Interest on funded debt —Fixed interest	703,366	−19,181
TOTAL FIXED CHARGES	808,425	−35,644
NET INCOME	2,705,827	+88,336
Disposition of net income:		
Income applied to sinking and other reserve funds	110,935	.....
Income appropriated for investment in physical property	760,811	+124,169
Total appropriations of income	871,745	+124,169
Income balance transferred to earned surplus	1,834,082	−35,833

CHICAGO & NORTH WESTERN.—*Substitution of Equipment.*—Division 4 of the Interstate Commerce Commission has authorized this road to substitute under its $3,750,000 second equipment trust of 1942, in the place of certain gondola cars which it was unable to obtain, 500 steel hopper ore cars of 70 tons capacity, estimated to cost $1,469,155.

DELAWARE, LACKAWANNA & WESTERN.—*Merger.*—In a proposed report, Examiners R. Romero and G. M. Eddy have recommended that the Interstate Commerce Commission authorize this company to acquire by merger the properties of the New York, Lackawanna & Western, and to acquire control through ownership of stock of the New York, Lackawanna & Western of Pennsylvania, a subsidiary thereof. The D. L. & W. would also be authorized, in order to complete the transaction, to assume liability for the principal and interest on $23,639,000 of the New York company's bonds, and to issue certificates of deposit

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Baldwin grew with the railroads—it knows railroad problems from the inside, and how to solve them—and this experience is reflected in the performance of locomotives, presses, testing equipment and all the other products that Baldwin makes for the railroads. The Baldwin Locomotive Works, Philadelphia, Pa., U. S. A.

How Baldwin serves the Railroads

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The Baldwin Locomotive Works, Philadelphia, Pennsylvania: Locomotive & Ordnance Division; Baldwin Southwark Division; Cramp Brass & Iron Foundries Division; Standard Steel Works Division; Baldwin De La Vergne Sales Corp.; The Whitcomb Locomotive Co.; The Pelton Water Wheel Co.; The Midvale Co.

in respect of 98,320 shares of the New York company's stock, $5,899,200 of its first and refunding mortgage 5 per cent bonds, $3,932,800 of its income mortgage bonds, and scrip certificates representing fractional interests in such bonds.

CHICAGO & EASTERN ILLINOIS.—*Annual Report.*—The 1943 report of this road shows a net income, after interest and other charges, of $1,846,422, as compared with $2,035,370 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared With 1942
Average Mileage Operated	911.93	−8.06
RAILWAY OPERATING REVENUES	$32,635,256	+8,671,082
Maintenance of way and structures	3,678,570	+1,335,775
Maintenance of equipment	4,720,058	+844,533
Transportation—rail line	10,735,076	+2,794,817
TOTAL OPERATING EXPENSES	21,124,893	+5,260,392
Operating ratio	64.73	−1.47
NET REVENUE FROM OPERATIONS	11,510,363	+3,410,690
Railway tax accruals	5,203,200	+2,570,000
RAILWAY OPERATING INCOME	6,307,163	+840,690
Equipment rents—Net Dr.	2,281,181	+1,305,919
Joint facility rent—Net Dr.	628,716	−74,563
NET RAILWAY OPERATING INCOME	3,397,266	−390,666
Total other income	252,884	−31,587
TOTAL INCOME	3,650,150	−422,253
Rent for leased roads and equipment	197,801	−129
Interest on funded debt	457,896	−4,426
TOTAL FIXED CHARGES	656,237	−10,387
BALANCE OF INCOME TRANSFERRED TO PROFIT AND LOSS	1,846,422	−188,948

TORONTO, HAMILTON & BUFFALO.—*Annual Report.*—The 1943 report of this road shows a net income, after interest and other charges, of $685,408, as compared to $1,108,168 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared With 1942
Average Mileage Operated	111.03	.....
RAILWAY OPERATING REVENUES	$4,076,226	+$479,064
TOTAL OPERATING EXPENSES	2,113,856	+169,001
Operating ratio	51.86	−2.21
NET REVENUE FROM OPERATIONS	1,962,370	+310,063
Railway tax accruals	1,169,588	+294,931
RAILWAY OPERATING INCOME	792,782	+15,132
Equipment rents—Net Dr.	5,042	+1,993
Joint facility rents—Net Cr.	73,566	+1,649
NET RAILWAY OPERATING INCOME	861,306	+14,788
Total other income	52,681	−432,171
GROSS INCOME	913,987	−417,382
Interest on funded debt	204,240	.....
TOTAL DEDUCTIONS FROM GROSS INCOME	228,579	+5,378
NET INCOME TRANSFERRED TO EARNED SURPLUS	685,408	−422,760

INDIANA HARBOR BELT.—*Annual Report.*—The 1943 annual report of this road shows net income, after interest and other charges, of $608,254, as compared with $1,232,675 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared With 1942
Average Mileage Operated	124.36	−.02
RAILWAY OPERATING REVENUES	$16,734,810	+$797,207
Maintenance of way and structures	1,561,602	+581,629
Maintenance of equipment	1,841,248	+382,593
Transportation	8,491,627	+939,486
TOTAL OPERATING EXPENSES	12,806,900	+1,967,825
Operating ratio	76.53	+8.52
NET REVENUE FROM OPERATIONS	3,927,910	−1,170,617
Railway tax accruals	1,493,798	−593,588
RAILWAY OPERATING INCOME	2,434,112	−577,029
Equipment rents—Net Dr.	1,014,630	+33,791
Joint facility rents—Net Dr.	349,591	+41,444
NET RAILWAY OPERATING INCOME	1,069,891	−652,264
Total other income	78,608	+28,124
TOTAL INCOME	1,148,499	−624,140
Rent for leased roads and equipment	104,593	+6,290
Interest on funded debt	389,500	−4,463
TOTAL FIXED CHARGES	503,451	+1,670
NET INCOME TRANSFERRED TO EARNED SURPLUS	608,254	−624,421

VIRGINIAN.—*Annual Report.*—The 1943 annual statement of this road shows a net income, after interest and other charges, of $5,304,306, as compared with $5,090,913 in 1942.

Selected items from the income statement follow:

	1943	Increase or Decrease Compared With 1942
Average Mileage Operated	657.5	+.32
RAILWAY OPERATING REVENUES	$27,300,864	+$777,717
Maintenance of way and structures	2,734,573	+544,405
Maintenance of equipment	5,937,016	+345,858
Transportation	5,140,809	+475,191
TOTAL OPERATING EXPENSES	14,739,994	+1,443,583
Operating ratio	53.99	+3.86
NET REVENUE FROM OPERATIONS	12,560,870	−665,866
*Railway tax accruals	6,400,000	−257,500
RAILWAY OPERATING INCOME	6,160,870	−408,366
Equipment rents—Net Cr.	1,270,671	+516,325
Joint facility rents—Net Cr.	55,682	+9,507
NET RAILWAY OPERATING INCOME	7,487,223	+117,466
Other income	80,258	+31,664
TOTAL INCOME	7,567,481	+149,130
Interest on funded debt	2,251,650	−10,115
TOTAL FIXED CHARGES	2,252,256	−70,250
NET INCOME TRANSFERRED TO EARNED SURPLUS	5,304,306	+213,393

* Includes provisions for Federal income and excess profits tax.

PERE MARQUETTE.—*Annual Report.*—The 1943 annual report for this road shows net income, after interest and other charges of $3,619,520, compared with net income of $3,569,066 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared With 1942
Average Mileage Operated	2,006.72	−45.56
RAILWAY OPERATING REVENUES	$55,052,804	+$10,741,496
Maintenance of way and structures	8,647,832	+2,525,563
Maintenance of equipment	9,453,289	+624,414
Transportation	18,423,801	+3,035,794
TOTAL OPERATING EXPENSES	39,197,743	+6,653,257
Operating ratio	71.2	−2.25
NET REVENUE FROM OPERATIONS	15,855,061	+4,088,239
Railway tax accruals	8,612,341	+3,793,270
RAILWAY OPERATING INCOME	7,242,720	+294,969
Equipment rents—Net Dr.	199,846	+243,218
Joint facility rents—Net Dr.	1,039,786	+323,943
NET RAILWAY OPERATING INCOME	6,003,088	−272,192
Other income	722,343	+129,084
TOTAL INCOME	6,782,232	−165,440
Rent for leased roads and equipment	69,285	+1,676
Interest on debt	2,992,058	−226,612
NET INCOME	3,619,520	+50,454

LEHIGH & NEW ENGLAND.—*Annual Report.*—The annual report of this road shows a net income, after interest and other charges, of $1,013,674, as compared with $1,144,511 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared With 1942
RAILWAY OPERATING REVENUES	$6,039,139	−$124,253
Maintenance of way and structures	571,280	+85,475
Maintenance of equipment	1,353,447	+94,745
Transportation	1,756,952	+12,087
TOTAL OPERATING EXPENSES	3,991,928	+201,980
Operating ratio	66.10	+4.61
NET REVENUE FROM OPERATIONS	2,047,211	−326,233
Railway tax accruals*	541,660	−523,808
RAILWAY OPERATING INCOME	1,505,551	+197,574
Net rent—Cr.	220,460	+52,876
NET RAILWAY OPERATING INCOME	1,726,011	+250,450
Total other income	29,063	+1,917
TOTAL INCOME	1,755,074	+252,368
Income available for fixed charges	1,324,338	−161,833
Interest on funded debt	306,411	−11,241
TOTAL FIXED CHARGES	310,664	−30,996
NET INCOME	1,013,674	−130,837
Disposition of net income:		
Income applied to sinking and other reserve funds	101,367	−13,084
Balance of income transferred to earned surplus	912,307	−117,752

* Including Company's estimate of Federal taxes on income.

PEORIA & EASTERN.—*Annual Report.*—The 1943 annual report of this road shows a net income, after interest and other charges, of $845,278, as compared with $750,902 in 1942. Selected items from the income statement follow:

	1943	Increase or Decrease Compared With 1942
Average Mileage Operated	211.44	.....
RAILWAY OPERATING REVENUES	$4,756,671	+$600,150
Maintenance of way and structures	740,486	+204,891
Maintenance of equipment	700,138	+89,117
Transportation	1,609,030	+131,291
TOTAL OPERATING EXPENSES	3,256,489	+451,976
Operating ratio	68.46	+.99
NET REVENUE FROM OPERATIONS	1,500,182	+148,174
Railway tax accruals	597,389	+85,618
RAILWAY OPERATING INCOME	902,793	+62,556
Equipment rents—Net Dr.	44,866	−14,178
Joint facility rents—Net Dr.	60,399	−4,383
NET RAILWAY OPERATING INCOME	797,529	+81,116
Total other income	54,214	+12,878
GROSS INCOME	851,742	+93,995
Miscellaneous rents	6,428	−364
TOTAL DEDUCTIONS FROM GROSS INCOME	6,465	−381
NET INCOME	845,278	+94,376

Average Prices Stocks and Bonds

	April 11	Last week	Last year
Average price of 20 representative railway stocks..	40.65	39.83	34.96
Average price of 20 representative railway bonds..	88.06	87.23	74.64

Dividends Declared

Atlantic Coast Line.—5% non-cum. preferred, $2.50, semi-annually, payable May 10 to holders of record April 24.

Erie.—$5 preferred A, $1.25; quarterly; payable June 1, September 1, and December 1 to holders of record May 17, August 17 and November 16, respectively.

Illinois Central—Leased Lines.—4% guaranteed, $2.00, semi-annually, payable July 1 to holders of record June 10.

Southern.—5% non-cum. preferred, $1.25, quarterly, payable June 15 and September 15 to holders of record May 15 and August 15, respectively.

United New Jersey Railroad & Canal.—$2.50, quarterly, payable April 10 to holders of record March 20.

Virginian.—6% preferred, 37½¢, quarterly, payable May 1 and August 1 to holders of record April 15 and July 15.

Wabash.—Common, $1.00; 4½% preferred, $4.50, annually; both payable April 21 to holders of record March 31.

COACH PORTERS.—The New York, New Haven & Hartford, on its heavily patronized trains, will soon have two smartly-uniformed coach porters assigned to each run. Wearing light blue coats, matching peaked caps and navy trousers with red side stripes, they will move through the train with broom and dustpan to keep the cars tidy enroute. Aboard, they will be supervised by the conductor, though they actually are attached to the dining car department. Any personal services which they can accord passengers will be a further courtesy of the line.

Abandonments

ATLANTIC COAST LINE.—Upon application of protestants, Commissioner Porter for the Interstate Commerce Commission has extended to May 10 the effective date of the certificate authorizing this road to abandon its line from Otisca, Ga., to Amsterdam, 10.35 miles.

CHICAGO, ROCK ISLAND & PACIFIC.—Upon further hearing, the Interstate Commerce Commission has affirmed a Division 4 report and order authorizing this road to abandon a branch from Stockton, Iowa, to Tipton, 21.66 miles, as noted in *Railway Age* of February 20, 1943, page 418. Commissioner Porter did not participate in consideration of the case upon further hearing. Commissioner Lee concurred in the result, while Commissioner Splawn dissented, stating that Commissioner Aitchison subscribed to his view.

The commission's report dealt with two issues, first, the failure of the protestants to comply with the rules of practice in seeking further hearing, and second, the propriety of the division's finding authorizing the abandonment, which was considered along with the fact that the road, acting under the provisions of the certificate then issued, had proceeded to dismantle a substantial part of the line before the rehearing application was granted. As to the question of procedure, the commission found that it had authority to grant a rehearing under the circumstances, even though it was not applied for as required by its rules of practice.

The majority went on to agree with Division 4 that the abandonment was justified, as the line was "operating at substantial losses," pointing out that its discontinuance "has not resulted in loss and inconvenience to the extent heretofore anticipated" by its patrons, and that "reconstruction of the branch and resumption of operation would impose an unnecessary and undue burden" on the road.

Commissioner Splawn objected to authorizing the abandonment in the face of wartime restrictions on truck operations. "Why the haste to abandon during a year of large net earnings for the system from war traffic?" he asked. "Is it possible that the adjustment of federal taxes on the abandonment of the line would have the result of selling the property to the taxpayers of the country and simultaneously removing it from the service of the public?" He added his view that abandonments should not be approved where, "as here, the showing of actual traffic, revenues, and public benefit is more favorable than the showing of probable traffic, revenues, and public benefit which we would accept as justification for the initial construction of the same line."

MISSOURI PACIFIC.—In a proposed report, Examiner Lucian Jordan has recommended that the Interstate Commerce Commission authorize this road's subsidiary, the Missouri Pacific in Nebraska, to abandon its line from a point near Auburn, Neb., to Crete, 70 miles, since "continued operation can be expected to result only in continued losses." The examiner proposes, however, that "the commission should take judicial notice of the progress of the war in Europe, and assume that it may end within a year," and on that basis, that it make the authorization to abandon effective one year from the date of the order, so giving recognition to the objections of certain shippers and the War Food Administration that immediate abandonment would result in serious inconvenience to the line's patrons and interfere with the marketing of needed farm products.

SEABOARD AIR LINE.—This road has applied to the Interstate Commerce Commission for authority to abandon a 3.5-mile segment of its Lake Charm branch at Winter Park, Fla., in connection with a proposal to construct an alternate line by which, in conjunction with a spur to be acquired from the federal government, operations in a residential area will be eliminated and better operating conditions will be obtained.

SEABOARD AIR LINE.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon a segment of branch line from Fletchers, Fla., to Terra Ceia, 1.3 miles.

Railway Officers

EXECUTIVE

Arthur Anderson, whose appointment as assistant to vice-president, improvements and development, of the New York Central at Washington, D. C., was announced in the *Railway Age* of March 18, was born on October 17, 1895, at Medicine Hat, Alta. In 1915 he received a B.S. in C.E. degree

Arthur Anderson

from Tri-State Engineering School at Angola, Ind., and entered railroad service in January of the following year as a levelman of the New York Central. After working also as instrumentman and draftsman in the office of the division engineer at Chicago, he became, in March, 1925, instrumentman on preliminary surveys for track

elevation at South Bend, Ind. From July, 1926, until April, 1942, Mr. Anderson held the positions of engineer draftsman and assistant engineer in the office of engineer of grade crossings, on preliminary plans and estimates for grade crossing elimination projects, at Cleveland, Ohio, and Chicago. For the past two years he has served as assistant to the late John G. Brennan, assistant to the vice-president, at Washington, D. C., a position which he held until his recent appointment as assistant to vice-president and secretary of the Committee on Grade Crossing Elimination, Association of American Railroads.

J. H. James, whose appointment as assistant to vice-president, Pittsburgh & Lake Erie, with headquarters at Pittsburgh, Pa., was announced in the *Railway Age* of March 25, was born on May 23, 1886, at Pittsburgh. He began his railroad career on January 1, 1906, as stenographer in the engineering department of the Pittsburgh & Lake Erie, being transferred to the operating department in January, 1910. In February, 1916, Mr. James was appointed chief clerk to the general manager. During the period of federal control in World War I he served as chief clerk to the federal manager, and upon termination of government ownership, he was named secretary and chief clerk to the vice-president. Mr.

J. H. James

James became purchasing agent in April, 1928, serving in this capacity until his present appointment as assistant to vice-president at Pittsburgh.

E. W. Smith, vice-president of the Pennsylvania, has been appointed also president of the Pittsburgh, Chartiers & Youghiogheny. He succeeds **C. M. Yohe,** vice-president of the Pittsburgh & Lake Erie. Mr. Smith is succeeded by **C. W. Van Horn,** vice-president of the Baltimore & Ohio, as president of the Monongahela.

M. Hurt Ramsey, superintendent of the Carolina & Northwestern and the Yadkin (Southern subsidiaries), at Hickory, N. C., has been appointed assistant to vice-president of the Southern and vice-president of the Southern's subsidiary lines, at Washington, D. C. **Henry E. Johnson,** superintendent of the Birmingham Terminal Company, at Birmingham, Ala., succeeds Mr. Ramsey as superintendent of the two subsidiary roads, and Mr. Johnson's successor is **Paul C. Raissle,** terminal trainmaster of the Birmingham Terminal Company.

Oliver Schiller, whose promotion to assistant to the president of the Terminal Railroad Association of St. Louis, with head-

Oliver Schiller

quarters at St. Louis, Mo., was reported in the *Railway Age* of April 8, was born at St. Clements, Mo., on November 25, 1903, and received his higher education at Washington University and St. Louis University. He entered railway service in June, 1918, as a messenger of the Terminal Railroad Association of St. Louis, subsequently serving as office boy, clerk and stenographer-clerk. Later Mr. Schiller was promoted to secretary to the president, with headquarters at St. Louis, holding the latter position until his new appointment became effective on March 27.

FINANCIAL, LEGAL AND ACCOUNTING

E. A. Kaier, assistant general counsel of the Pennsylvania, has been named also assistant general counsel of the Monongahela to succeed **S. G. Cramp,** who has retired.

OPERATING

E. C. McDonald has been appointed assistant superintendent of the Florida East Coast with headquarters at New Smyrna Beach, Fla.

O. B. Keister, Jr., has been appointed as superintendent of the Mobile division, Southern, with headquarters at Selma, Ala.

J. R. Grove, superintendent of motive power of the Lehigh Valley who recently added to his duties those of assistant general manager, has been appointed general superintendent at Bethlehem, Pa.

H. C. Goltz has been appointed trainmaster of the Newburgh & South Shore, with headquarters at Cleveland, Ohio, succeeding **H. Robb,** deceased.

C. W. Harrison, car accountant of the Duluth, Missabe & Iron Range, with headquarters at Duluth, Minn., has been promoted to car service agent, with the same headquarters.

E. R. Pilot, assistant trainmaster of the Columbus division of the Pennsylvania, with headquarters at Columbus, Ohio, has been promoted to passenger trainmaster of the Atlantic division of the Pennsylvania and the Pennsylvania-Reading Seashore Lines, with headquarters at Philadelphia, Pa.

TRAFFIC

S. L. Williams, city passenger agent of the Great Northern, with headquarters at Los Angeles, Calif., has been promoted to district passenger agent, with the same headquarters.

W. H. Thompson has been appointed general freight agent of the Meridian & Bigbee River, with headquarters at Meridian, Miss., succeeding **F. J. Bolling,** who has resigned.

P. J. Schmidt, traveling freight agent of the Chicago, Rock Island & Pacific, with headquarters at Omaha, Neb., has been promoted to division freight agent, with headquarters at Hutchinson, Kan.

S. O. Belcher, general agent of the Midland Valley, the Kansas, Oklahoma & Gulf, and the Oklahoma City-Ada-Atoka, with headquarters at Kansas City, Mo., has been promoted to general freight agent of all three roads, with headquarters at Muskogee, Okla.

Ralph G. Campbell has been appointed general agent of the Quanah, Acme & Pacific, with headquarters at San Francisco, Calif., succeeding **Syl R. Fiorita,** who has resigned. **William J. Irwin** has been appointed general agent, with headquarters at Washington, D. C., replacing **T. A. Hicks,** who has resigned.

Edwin J. Falk, whose promotion to freight traffic manager of the Missouri Pacific Lines, with headquarters at Houston, Tex., was reported in the *Railway Age* of April 8, was born at St. Louis, Mo., on September 25, 1896, and entered railway service in 1911 as a stenographer of the Missouri Pacific at St. Louis. He subsequently held several clerical positions and

Edwin J. Falk

in March, 1920, he was promoted to soliciting freight agent, with headquarters at St. Louis. On May 1, 1927, Mr. Falk was advanced to chief clerk of the freight traffic

manager, and in 1932 he was further promoted to assistant general freight agent, with headquarters at St. Louis. One year later he was advanced to executive general agent at San Antonio, Tex., and in 1942 he was promoted to general freight and passenger agent, with headquarters at Kansas City, Mo., the position he held at the time of his new appointment.

J. S. Chartrand, division freight agent of the Gulf, Mobile & Ohio, with headquarters at St. Louis, Mo., has been advanced to general freight agent, with the same headquarters, succeeding **Ivan H. Wente,** whose promotion to assistant traffic manager, with headquarters at Chicago, was reported in the *Railway Age* of April 8.

Francis E. Pennington, whose promotion to general freight and passenger agent of the Missouri Pacific, with headquarters at Kansas City, Mo., was reported in the *Railway Age* of April 8, was born at Marvin, Tenn., on August 15, 1895, and entered railway service on February 20, 1916, as a ticket seller on the Southern at Bulls Gap, Tenn., serving in this position at various points on this road until December 1, 1921, when he was appointed traveling passenger agent at Chattanooga, Tenn. In the following year Mr. Pennington left the service of the Southern to go with the Missouri Pacific

Francis E. Pennington

as traveling passenger agent at Birmingham, Ala., being transferred to Memphis, Tenn., on October 10, 1927. He was appointed division passenger agent with the same headquarters on February 1, 1929, and on May 1 of the same year he was advanced to general agent for the Missouri Pacific Lines at Washington, D. C., being transferred to Pittsburgh, Pa., on October 15, 1934. In March, 1936, Mr. Pennington was promoted to general freight agent of the Missouri Pacific, with headquarters at St. Louis, Mo., the position he held at the time of his new appointment.

William H. Rabe, whose promotion to general freight agent of the Missouri Pacific, with headquarters at St. Louis, Mo., was reported in the *Railway Age* of April 8, was born at Chester, Ill., on August 17, 1886, and entered railway service with the Cleveland, Cincinnati, Chicago & St. Louis (Big Four), in 1903, as a yard clerk at East St. Louis, Ill. In April, 1905, he entered the service of the Missouri Pacific as a yard clerk at Bixby, Ill., subsequently serving in various capacities at East St. Louis, Dupo, Ill., Carondolet, Mo., and St. Louis. On July 1, 1920, Mr. Rabe was promoted to

William H. Rabe

commercial agent, with headquarters at St. Louis, and three years later he was advanced to division freight agent at East St. Louis. On November 1, 1933, he was promoted to general agent, with headquarters at St. Louis, the position he held at the time of his new appointment.

PURCHASES AND STORES

Elmer F. Schaefer, purchasing agent of the Pittsburgh & Lake Erie, has added to his duties those of purchasing agent of the Monongahela. He replaces **J. H. James,** whose promotion on the Pittsburgh & Lake Erie is noted elsewhere in these columns.

ENGINEERING & SIGNALING

George Roy Doull, whose appointment as bridge engineer of the Canadian National, Atlantic region, was announced in the *Railway Age* of March 11, was born at New Glasgow, N. S. Following service with the Maritime Bridge Company at that place, he joined the service of the Canadian Government Railways on August 28, 1914, as tracer on the construction of the Halifax Ocean Terminals. In August, 1916, Mr. Doull was promoted to draftsman, and in November of the same year he was transferred to Moncton, N. B., from where he was moved to Toronto, Ont., in May, 1921, as an assistant engineer. In July, 1943, Mr. Doull returned to the engineering department at Moncton, and remained in that capacity until his present appointment as bridge engineer, Atlantic region.

MECHANICAL

P. J. Sproule, master mechanic of the Canadian National, with headquarters at Sioux Lookout, Ont., has been promoted to acting superintendent of motive power and car equipment of the British Columbia district, with headquarters at Vancouver, B. C., succeeding **C. J. Quantic,** who has been granted a leave of absence because of ill health.

E. A. Adamson, master car builder of the Central of Georgia, has retired from active duty after 55 years of continuous service with that road. Mr. Adamson was born at Macon, Ga., on March 30, 1874, and entered railway service as an apprentice in the car department of the Central of Georgia in May, 1889. Five years later he became car repairer at Macon, being appointed gang foreman at that location in June, 1896. He was named foreman of car repairs at Macon in June, 1910, and general foreman of car inspectors at the same place in October, 1918. After serving two years as general foreman of car department, Mr. Adamson was appointed to the position of master car builder at Savannah, Ga., in May, 1920. He served in this capacity until his retirement, effective March 31.

SPECIAL

Roy P. Hamilton, safety supervisor, Western lines, of the Southern, with headquarters at Birmingham, Ala., has been promoted to general safety supervisor, Western lines, with headquarters at Cincinnati, Ohio, succeeding **Charles R. Staples,** who has retired after 38 years service.

OBITUARY

Dr. Walter B. Coffey, who retired in 1938 as chief surgeon and manager of the hospital department of the Southern Pacific, with headquarters at San Francisco, Calif., died in that city on March 25.

Robert B. Ferguson, who retired in 1938 as comptroller of the Delaware, Lackawanna & Western, died at his home at Springfield, N. J., on April 7, at the age of 80.

Roy A. Brown, division engineer of the Chicago, Rock Island & Pacific, with headquarters at Fairbury, Neb., was killed in a motor car accident on April 7.

Samuel Porcher, who retired in 1927 as assistant vice-president, purchases, stores and insurance, of the Pennsylvania, died on April 5 at his home at Philadelphia, Pa. He was 86 years old.

Lieutenant-Colonel Percy A. Cox, retired assistant Oriental manager of the Canadian Pacific at Hongkong, died at Ste. Agathe, Que., on April 3, following his return to Canada in December, 1943, on the S. S. Gripsholm. He was 73 years old.

Harry L. Margetts, assistant to the vice-president and general manager of the Michigan Central, with headquarters at Detroit, Mich., died at his home in that city on March 30. Mr. Margetts was born at Niagara Falls, Ont., on October 10, 1881, and entered railway service with the Michigan Central on March 4, 1898, as a car checker at St. Thomas, Ont. He held several minor positions until January 1, 1919, when he was promoted to trainmaster, with headquarters at Windsor, Ont. In 1926 he was advanced to division superintendent, with headquarters at St. Thomas. A short time later he was transferred to Chicago, and in September, 1930, he was promoted to general superintendent, with headquarters at Detroit. In 1937 Mr. Margetts was further promoted to assistant general manager, with the same headquarters, and on January 1, 1940, he was advanced to the position he held at the time of his death.

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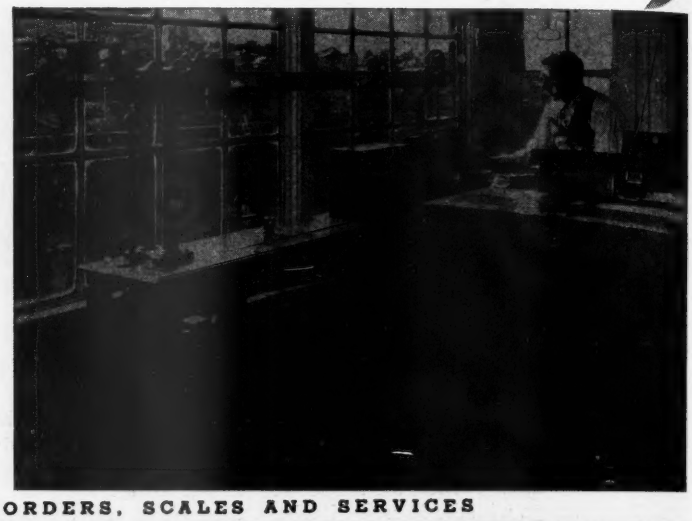

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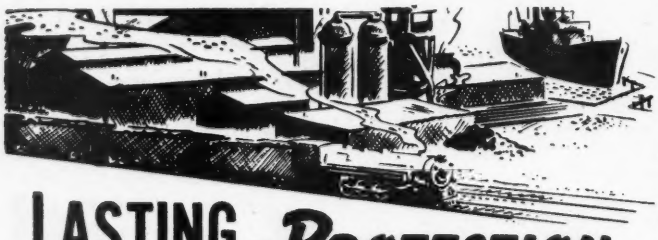

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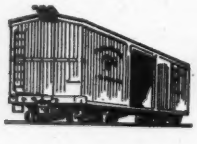

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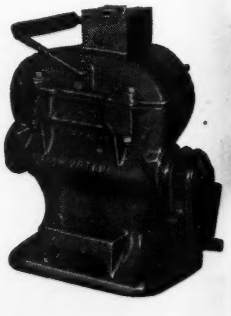

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